Diary.

Joshua G. Baker
South Dartmouth
Mass.

Sailed from
San Francisco
Mar. 9th 1893
S/W Whaler
"Beluga"
on an arctic
Whaling
Voyage

THE STANDARD DIARY

PUBLISHED FOR THE TRADE

CALENDAR.

1893.

	Sun	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
JAN.	..	..	..	..	..	..	..
	1	2	3	4	5	6	7
	8	9	10	11	12	13	14
	15	16	17	18	19	20	21
	22	23	24	25	26	27	28
	29	30	31	..	..	..	..
FEB.	..	..	..	1	2	3	4
	5	6	7	8	9	10	11
	12	13	14	15	16	17	18
	19	20	21	22	23	24	25
	26	27	28	..	..	..	..
MAR.	..	..	..	1	2	3	4
	5	6	7	8	9	10	11
	12	13	14	15	16	17	18
	19	20	21	22	23	24	25
	26	27	28	29	30	31	..
APRIL.	..	..	..	..	..	..	1
	2	3	4	5	6	7	8
	9	10	11	12	13	14	15
	16	17	18	19	20	21	22
	23	24	25	26	27	28	29
	30	..	..	..	..	..	..
MAY.	..	1	2	3	4	5	6
	7	8	9	10	11	12	13
	14	15	16	17	18	19	20
	21	22	23	24	25	26	27
	28	29	30	31	..	..	..
JUNE.	..	..	..	..	1	2	3
	4	5	6	7	8	9	10
	11	12	13	14	15	16	17
	18	19	20	21	22	23	24
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	Sun.	Mon.	Tues.	Wed.	Thurs.	Fri.	Sat.
JULY.	..	..	..	..	..	..	1
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	23	24	25	26	27	28	29
	30	31	..	..	..	..	..
AUG.	..	..	1	2	3	4	5
	6	7	8	9	10	11	12
	13	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28	29	30	31	..	..
SEPT.	..	..	..	..	..	1	2
	3	4	5	6	7	8	9
	10	11	12	13	14	15	16
	17	18	19	20	21	22	23
	24	25	26	27	28	29	30
OCT.	..	..	..	..	..	..	..
	1	2	3	4	5	6	7
	8	9	10	11	12	13	14
	15	16	17	18	19	20	21
	22	23	24	25	26	27	28
	29	30	31	..	..	..	..
NOV.	..	..	..	1	2	3	4
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	12	13	14	15	16	17	18
	19	20	21	22	23	24	25
	26	27	28	29	30	..	..
DEC.	..	..	..	..	..	1	2
	3	4	5	6	7	8	9
	10	11	12	13	14	15	16
	17	18	19	20	21	22	23
	24	25	26	27	28	29	30
	31	..	..	..	..	..	..

WEIGHTS AND MEASURES.

MEASURE OF LENGTH.

4	In.	make	1 Hand.	3	Feet	make	1 Yard.
7.92	In.	"	1 Link.	5½	Yds.	"	1 Rod or Pole
18	In.	"	1 Cubit.	40	Poles	"	1 Furlong.
12	In.	"	1 Foot.	8	Fur.	"	1 Mile.
6	Ft.	"	1 Fathom.	69 1-6	Miles	make	1 Degree.

60 Geographical Miles make 1 Degree.

1760 Yards } = 1 Mile.
5280 Feet }

MEASURE OF SURFACE.

144	Square Inches	make	1 Square Foot.
9	Square Feet	"	1 Square Yard.
30¼	Square Yards	"	1 Rod, Perch or Pole.
40	Square Rods	"	1 Square Rood.
4	Square Roods	"	1 Square Acre.
10	Square Chains	"	1 Square Acre.
640	Square Acres	"	1 Square Mile.

Gunter's Chain equal to 22 Yards or 100 Links.
272¼ Square Feet make 1 Square Rod.
43,560 Square Feet " 1 Acre.

MEASURE OF SOLIDITY.

1728 Cubic Inches make 1 Cubic Foot.
27 Cubic Feet " 1 Cubic Yard.

AVOIRDUPOIS WEIGHT.

27 11/32	Grains	make	1 Drachm (dr.)	or	27 11/32	Grains.
16	Drachms	"	1 Ounce (oz.)	or	437½	"
16	Ounces	"	1 Pound (lb.)	or	7000	"
28	Pounds	"	1 Quarter (qr.)			
4	Quarters	"	1 Hundred-Weight (cwt.)			
20	Cwts.	"	1 Ton.			
2240	Pounds	"	1 Ton.			

TROY WEIGHT.

24	Grains	make	1 Pennyweight,	or	24	Grains.
20	Pennywts.	"	1 Ounce,	or	480	"
12	Ounces	"	1 Pound,	or	5760	"

APOTHECARIES' WEIGHT.

20	Grains	make	1 Scruple.	8	Drachms	make	1 Ounce.
3	Scruples	"	1 Drachm.	12	Ounces	"	1 Pound.

DIAMOND WEIGHT.

16 Parts make 1 Grain (4-5ths Grain Troy.)
4 Grains " 1 Carat (3 1-5th Grains Troy.)

LIQUID MEASURE.

4	Gills	make	1 Pint.	31½	Gallons	make	1 Barrel.
2	Pints	"	1 Quart.	54	Gallons	"	1 Hhd.
4	Quarts	"	1 Gallon.	252	Gallons	"	1 Tun.

DRY MEASURE.

8	Quarts	make	1 Peck.	8	Bushels	make	1 Quarter.
4	Pecks	"	1 Bushel.	36	Bushels	"	1 Chaldron.

1 Bushel equal to 2150.42 cubic inches.

WEIGHT PER BUSHEL OF GRAIN, ETC.

The following Table shows the number of pounds per bushel required, by law or custom, in the sale of articles specified, in the several States of the Union.

STATES.	Barley.	Buckwheat.	Coal.	Corn, shel'd	Corn Meal.	Onions.	Oats.	Potatoes.	Rye.	Wheat.	Salt.	Turnips.	Beans, wh.	Clover S'd.	Timothy.
Maine	48	48	..	56	50	52	30	60	..	60	..	50	64	..	..
N. Hampshire	..	..	..	56	50	..	30	60	56	60	..	..	60	..	..
Vermont	48	48	..	..	..	..	32	60	56	60	70	..	64	60	42
Massachusetts	48	48	..	56	50	52	32	60	56	60	..	..	..	..	..
Connecticut	..	45	..	56	..	..	32	60	56	56	..	..	..	..	..
New York	48	48	..	58	..	..	32	60	56	60	..	..	62	60	44
New Jersey	48	50	..	56	..	..	30	60	56	60	..	..	..	64	..
Pennsylvania	47	48	..	56	..	..	30	56	56	60	85	..	..	62	..
Delaware	..	..	..	56	..	..	..	..	..	60	..	..	..	..	..
Maryland	48	48	..	56	..	57	32	60	56	60	56	..	62	64	45
Dist. Columbia	47	48	..	56	48	57	32	56	56	60	50	55	62	60	45
Virginia	48	48	..	56	50	..	32	60	56	60	..	56	60	64	45
West Virginia	48	52	80	56	48	..	32	60	56	60	..	60	60	60	45
North Carolina	48	50	..	54	46	..	30	..	56	60	..	..	..	64	..
South Carolina	48	56	80	56	50	57	33	60	56	60	50	..	60	60	..
Georgia	40	..	80	56	48	57	35	56	..	60	56	..	..	60	45
Louisiana	32	..	..	56	..	..	32	..	..	60	..	..	..	..	..
Arkansas	48	52	80	56	50	57	32	60	56	60	50	..	60	60	45
Tennessee	48	50	..	56	50	56	32	60	56	60	..	..	60	..	45
Kentucky	48	52	..	56	50	57	33	56	56	60	50	..	60	60	45
Ohio	48	50	..	56	..	..	32	60	56	60	..	..	60	60	45
Michigan	48	48	80	56	..	54	32	60	56	60	56	58	60	60	45
Indiana	48	50	70	56	50	48	32	60	56	60	50	..	60	60	..
Illinois	48	52	..	56	48	57	32	60	56	60	50	..	60	60	..
Wisconsin	48	50	..	56	..	..	32	60	56	60	..	..	..	60	..
Minnesota	48	42	..	56	..	..	32	60	56	60	..	..	..	60	..
Iowa	48	52	..	56	..	57	33	60	56	60	50	..	60	60	45
Missouri	48	52	..	56	..	57	32	60	56	60	50	..	60	60	45
Kansas	50	50	..	56	50	57	32	60	56	60	50	55	60	..	45
Nebraska	48	52	..	56	50	57	34	60	56	60	50	55	60	60	45
California	50	40	..	52	..	..	32	..	54	60	..	..	..	..	..
Oregon	46	42	..	56	..	..	36	60	56	60	..	..	..	60	..

INTEREST TABLE.

FOUR PER CENT.

Time.	$1	$2	$3	$4	$5	$6	$7	$8	$9	$10	$100	$1000
1 Dy.	0	0	0	0	0	0	0	0	0	0	1	11
3 "	0	0	0	0	0	0	0	0	0	½	3½	33
5 "	0	0	0	0	0	0	0	½	½	½	5½	56
10 "	0	0	0	½	½	½	1	1	1	1	11	1 11
1 Mo.	0	½	1	1½	1½	2	2½	2½	3	3½	33	3 33
2 "	½	1½	2	2½	3½	4	4½	5½	6	6½	67	6 67
3 "	1	2	3	4	5	6	7	8	9	10	1 00	10 00
4 "	1½	2½	4	5½	6½	8	9½	10½	12	13½	1 33	13 33
5 "	1½	3½	5	6½	8½	10	11½	13½	15	16½	1 67	16 67
6 "	2	4	6	8	10	12	14	16	18	20	2 00	20 00
7 "	2½	4½	7	9½	11½	14	16½	18½	21	23½	2 33	23 33
8 "	2½	5½	8	10½	13½	16	18½	21½	24	26½	2 67	26 67
9 "	3	6	9	12	15	18	21	24	27	30	3 00	30 00
10 "	3½	6½	10	13½	16½	20	23½	26½	30	33½	3 33	33 33
11 "	3½	7½	11	14½	18½	22	25½	29½	33	36½	3 67	36 67
1 Yr.	4	8	12	16	20	24	28	32	36	40	4 00	40 00

FIVE PER CENT.

Time.	$1	$2	$3	$4	$5	$6	$7	$8	$9	$10	$100	$1000
1 Dy.	0	0	0	0	0	0	0	0	0	0	1	14
3 "	0	0	0	0	0	0	0	0	0	0	4	42
5 "	0	0	0	0	0	0	0	1	1	1	7	69
10 "	0	0	0	½	1	1	1	1	1	1½	14	1 39
1 Mo.	½	1	1	2	2	3	3	3	4	4	42	4 17
2 "	1	1¾	3	3	4	5	6	7	8	8	83	8 33
3 "	1	2½	4	5	6	8	9	10	11	13	1 25	12 50
4 "	1½	3	5	7	8	10	12	13	15	17	1 67	16 67
5 "	2	4	6	8	10	13	15	17	19	21	2 08	20 83
6 "	2½	5	8	10	13	15	18	20	23	25	2 50	25 00
7 "	3	6	9	12	15	18	20	23	26	29	2 92	29 17
8 "	3	7	10	13	17	20	23	27	30	33	3 33	33 33
9 "	3¾	7½	11	15	19	23	26	30	34	38	3 75	37 50
10 "	4	8	13	17	21	25	29	33	38	42	4 17	41 67
11 "	4½	9	14	18	23	28	32	37	41	46	4 58	45 83
1 Yr.	5	10	15	20	25	30	35	40	45	50	5 00	50 00

SIX PER CENT.

Time.	$1	$2	$3	$4	$5	$6	$7	$8	$9	$10	$100	$1000
1 Dy.	0	0	0	0	0	0	0	0	0	0	2	17
3 "	0	0	0	0	0	0	0	0	0	1	5	50
5 "	0	0	0	0	0	½	1	1	1	1	8	83
10 "	0	0	1	1	1	1	1	1	2	2	17	1 67
1 Mo.	½	1	2	2	3	3	4	4	5	5	50	5 00
2 "	1	2	3	4	5	6	7	8	9	10	1 00	10 00
3 "	1½	3	5	6	8	9	11	12	14	15	1 50	15 00
4 "	2	4	6	8	10	12	14	16	18	20	2 00	20 00
5 "	2½	5	8	10	13	15	18	20	23	25	2 50	25 00
6 "	3	6	9	12	15	18	21	24	27	30	3 00	30 00
7 "	3½	7	11	14	18	21	25	28	32	35	3 50	35 00
8 "	4	8	12	16	20	24	28	32	36	40	4 00	40 00
9 "	4½	9	14	18	23	27	32	36	41	45	4 50	45 00
10 "	5	10	15	20	25	30	35	40	45	50	5 00	50 00
11 "	5½	11	17	22	28	33	39	44	50	55	5 50	55 00
1 Yr.	6	12	18	24	30	36	42	48	54	60	6 00	60 00

RATE OF INCOME ON STOCKS.

Purchased at the following prices, (par value being $100), and bearing interest at the following rates.

Paid.	3%	4%	5%	6%	7%	8%	9%
$50	6 00	8 00	10 00	12 00	14 00	16 00	18 00
55	5 45	7 27	9 09	10 90	12 72	14 55	16 36
60	5 00	6 67	8 33	10 00	11 66	13 33	15 00
65	4 62	6 15	7 69	9 23	10 76	12 30	13 85
70	4 28	5 71	7 14	8 57	10 00	11 42	12 85
75	4 00	5 33	6 66	8 00	9 33	10 66	12 00
80	3 75	5 00	6 25	7 50	8 75	10 00	11 25
85	3 53	4 70	5 88	7 05	8 23	9 41	10 58
90	3 33	4 44	5 55	6 66	7 77	8 88	10 00
91	3 30	4 40	5 49	6 59	7 69	8 79	9 89
92	3 26	4 34	5 43	6 52	7 60	8 70	9 78
93	3 23	4 30	5 38	6 45	7 53	8 60	9 68
94	3 19	4 26	5 32	6 38	7 45	8 51	9 57
95	3 15	4 21	5 26	6 31	7 36	8 42	9 47
96	3 13	4 17	5 21	6 25	7 29	8 33	9 38
97	3 09	4 12	5 15	6 18	7 22	8 25	9 28
98	3 06	4 08	5 10	6 12	7 14	8 16	9 18
99	3 03	4 04	5 05	6 06	7 07	8 08	9 09
101	2 97	3 96	4 95	5 94	6 93	7 92	8 91
102	2 94	3 92	4 90	5 88	6 86	7 84	8 82
103	2 91	3 88	4 85	5 83	6 80	7 77	8 74
104	2 88	3 85	4 81	5 77	6 73	7 69	8 65
105	2 86	3 80	4 76	5 71	6 66	7 61	8 57
106	2 83	3 77	4 72	5 66	6 60	7 55	8 49
107	2 80	3 74	4 67	5 61	6 54	7 48	8 41
108	2 78	3 70	4 63	5 56	6 48	7 41	8 33
109	2 75	3 67	4 59	5 50	6 42	7 34	8 26
110	2 72	3 63	4 54	5 45	6 36	7 27	8 18
115	2 60	3 48	4 34	5 21	6 08	6 95	7 83
120	2 50	3 33	4 16	5 00	5 83	6 66	7 50
130	2 30	3 07	3 84	4 61	5 38	6 15	6 92
140	2 14	2 86	3 57	4 28	5 00	5 71	6 43
150	2 00	2 67	3 33	4 00	4 66	5 33	6 00
160	1 88	2 50	3 12	3 75	4 38	5 00	5 62
170	. .	. .	. .	3 53	4 12	4 70	5 29
180	. .	. .	. .	3 33	3 88	4 44	5 00
190	. .	. .	. .	3 16	3 68	4 21	4 74
200	. .	. .	. .	3 00	3 50	4 00	4 50

RATES OF POSTAGE.

POSTAL CARDS, 1 cent each, go without further charge to all parts of the United States and Canada. Cards for foreign countries (within the Postal Union) 2 cents each. *Postal Cards are unmailable* with any writing or printing on the address side, except the direction, or with anything pasted upon or attached to them.

ALL LETTERS, to all parts of the United States and Canada, 2 cents for each ounce or fraction thereof.

LOCAL, OR "DROP" LETTERS, that is, for the city or town where deposited, 2 cents where the carrier system is adopted, and 1 cent where there is no carrier system.

FIRST CLASS.—Letters and all other written matter, *whether sealed or unsealed*, and all other matter *sealed, nailed, sewed, tied, or fastened in any manner* so that it cannot be easily examined, 2 cents for each ounce or fraction thereof.

SECOND CLASS.—Only for publishers and news-agents; 1 cent per pound.

NEWSPAPERS and Periodicals (regular publications) can be mailed by the public at the rate of 1 cent for each 4 ounces or fraction thereof.

THIRD CLASS.—Printed matter, in *unsealed wrappers only* (all matter inclosed in notched envelopes must pay letter rates), 1 cent for each 2 ounces or fraction thereof, *which must be fully prepaid.* This includes books, circulars, chromos, engravings, handbills, lithographs, music, pamphlets, proof-sheets and manuscript accompanying the same, reproductions by the electric pen, hektograph, metallograph, papyrograph, and, in short, any reproduction upon paper by any process *except handwriting and the copying press.* Limit of weight 4 lbs., except for a single book, which may weigh more.

FOURTH CLASS.—All mailable matter not included in the three preceding classes which is so prepared for mailing as to be *easily withdrawn from the wrapper* and examined, 1 cent per ounce or fraction thereof. Limit of weight, 4 lbs. Full prepayment compulsory.

REFORWARDING.—Letters will be forwarded from one post office to another upon the *written* request of the *person addressed*, without additional postage charge; but unclaimed packages *cannot be returned to the sender* until stamps are furnished to pay the return postage.

PERMISSIBLE WRITING.—No writing is permitted on third or fourth class matter except as follows: The name and address of sender on the outside or inside of package, preceded by the word "from." On the wrapper may also be written the names and number of articles inclosed. The sender is further allowed to mark a word or passage in a book or paper to which he desires to call special attention. He may also write a simple inscription

or dedication upon the cover or blank leaves of a book or pamphlet. There may be attached to articles of merchandise, by tag or label, a mark, number, name, or letter for purpose of identification. Printed circulars may contain the written name of the sender, or of the addressee, and the date. Any other writing on third or fourth class matter will subject the package to letter rates of postage, and render the sender liable to a fine of ten dollars for each offense. Printed matter may be inclosed with fourth class matter, but the whole package is subject to the rate of 1 cent per ounce or fraction thereof.

POSTAL NOTES.

Upon payment of a fee of 3 cents each, Postal Notes for any amount under Five Dollars may be purchased at any Money-order Office, payable to bearer at any time within three calendar months from the last day of the month during which it was issued; but payable *only* at such Money-order Office as the purchaser may select or at the office of issue.

MONEY ORDERS.

For Orders not exceeding $5	. . . .	5 cents.
Exceeding $5 and not exceeding $10	. .	8 "
" 10 " " " 15	. .	10 "
" 15 " " " 30	. .	15 "
" 30 " " " 40	. .	20 "
" 40 " " " 50	. .	25 "
" 50 " " " 60	. .	30 "
" 60 " " " 70	. .	35 "
" 70 " " " 80	. .	40 "
" 80 " " " 100	. .	45 "

When a larger sum than $100 is required, additional Orders to make it up must be obtained.

FOREIGN POSTAGE.

The rates for letters are for the half ounce or fraction thereof, and those for newspapers for 2 ounces or fraction thereof:—

To Great Britain and Ireland, France, Spain, all parts of Germany, including Austria, Denmark, Switzerland, Italy, Russia, Norway, Sweden, Turkey (European and Asiatic), Egypt, letters 5 cents, newspapers 1 cent for each 2 ounces or fraction thereof.

To Australia, letters, via San Francisco (except to New South Wales), 5 cents; via Brindisi, 15 cents; newspapers, via San Francisco, 2 cents; via Brindisi, 4 cents. China, letters, via San Francisco, 5 cents; via Brindisi, 13 cents; 4 cents for each paper not weighing over 4 ounces. British India, Italian mail, letters 5 cents, newspapers 1 cent for 2 ounces. Japan, letters, via San Francisco, 5 cents; newspapers 1 cent for 2 ounces.

HELP! In case of Accidents.

Drowning. **1.** Loosen clothing, if any. **2.** Empty lungs of water by laying body on its stomach and lifting it by the middle so that the head hangs down. Jerk the body a few times. **3.** Pull tongue forward, using handkerchief, or pin with string, if necessary. **4.** Imitate motion of respiration by alternately compressing and expanding the lower ribs, about twenty times a minute. Alternately raising and lowering the arms from the sides up above the head will stimulate the action of the lungs. Let it be done gently but persistently. **5.** Apply warmth and friction to extremities. **6.** By holding tongue forward, closing the nostrils and pressing the "Adam's apple" back, (so as to close entrance to stomach), direct inflation may be tried. Take a deep breath and breathe it forcibly into the mouth of patient, compress the chest to expel the air, and repeat the operation. **7.** DON'T GIVE UP! People have been saved after HOURS of patient, vigorous effort. **8.** When breathing begins, get patient into a warm bed, give WARM drinks, or spirits in teaspoonfuls, fresh air and quiet.

Burns and Scalds. Cover with Cooking Soda and lay wet cloths over it. Whites of Eggs and Olive Oil. Olive or Linseed Oil, plain, or mixed with Chalk or Whiting.

Lightning. Dash cold water over a person struck.

Sunstroke. Loosen clothing. Get patient into shade and apply ice-cold water to head.

Mad Dog or Snake Bite. Tie cord tight above wound. Suck the wound and cauterize with caustic or white-hot iron at once, or cut out adjoining parts with a sharp knife.

Venomous Insects Stings, &c. Apply weak Ammonia, Oil, Salt Water, or Iodine.

Fainting. Place flat on back; allow fresh air and sprinkle with water.

Tests of Death. Hold mirror to mouth. If living, moisture will gather. Push pin into flesh. If dead the hole will remain, if alive it will close up.

Cinders in the Eye. Roll soft paper up like a lamp lighter and wet the tip to remove, or use a medicine dropper to draw it out. Rub the *other* eye.

Fire in one's Clothing. *Don't run*,—especially not down stairs or out of doors. Roll on carpet, or wrap in woolen rug or blanket. Keep the head down, so as not to inhale flame.

Fire in a Building. Crawl on the floor. The clearest air is the lowest in the room. Cover head with a woolen wrap, wet if possible. Cut holes for the eyes. Don't get excited

Fire in Kerosene. *Don't use water*, it will spread the flames. Dirt, sand or flour is the best extinguisher; or smother with woolen rug, table-cloth or carpet.

ANTIDOTES FOR POISONS.

First. Send for a Physician.

Second. INDUCE VOMITING, by tickling throat with feather or finger. Drinking hot water or strong Mustard and water. Swallow Sweet Oil or whites of Eggs.

Acids are antidotes for ALKALIES, and *vice versa.*

SPECIAL POISONS AND ANTIDOTES.

Acids. MURIATIC, OXALIC. ACETIC. SULPHURIC (Oil of Vitriol). NITRIC (Aqua Fortis).	Soap-suds, Magnesia, Lime-water.
Prussic Acid.	Ammonia in water. Dash water in face.
Carbolic Acid.	Flour and water, mucilaginous drinks.
Alkalies. POTASH. LYE. HARTSHORN. AMMONIA.	Vinegar or Lemon juice in water.
Arsenic. **Rat Poison.** **Paris Green.**	Milk, Raw Eggs, Sweet Oil, Lime-water, Flour aud water.
Bug Poison. **Lead.** **Saltpetre.** **Corrosive Sublimate.** **Sugar of Lead.** **Blue Vitriol.**	Whites of Eggs or Milk in large doses.
Chloroform. **Chloral.** **Ether.**	Dash cold water on head and chest. Artificial respiration. Piece of ice in rectum.
Carbonate of Soda. **Copperas.** **Cobalt.**	Soap-suds and mucilaginous drinks.
Iodine. **Antimony.** **Tartar Emetic.**	Starch and water. Astringent infusions. Strong tea.
Mercury AND ITS SALTS.	Whites of Eggs. Milk. Mucilages.
Nitrate of Silver. **Lunar Caustic.**	Salt and water.
Opium. **Morphine.** **Laudanum.** **Paregoric.** **Soothing Powders or Syrups.**	Strong coffee, hot bath. Keep awake and moving at any cost.
Strychnine. **Tinct. of Nux Vomica.**	Mustard and water, Sulphate of Zinc. Absolute quiet. Plug the ears.

POPULATION OF THE UNITED STATES.

The official count of the returns of the Eleventh Census as finally determined.

States and Territories.	1890.	1880.
Alabama	1,513,017	1,262,505
Alaska	.....	.....
Arizona	59,620	40,440
Arkansas	1,128,179	802,525
California	1,208,130	864,694
Colorado	412,198	194,327
Connecticut	746,258	622,700
Delaware	168,493	146,608
District of Columbia	230,392	177,624
Florida	391,422	269,493
Georgia	1,837,353	1,542,180
Idaho	84,385	32,610
Illinois	3,826,351	3,077,871
Indiana	2,192,404	1,978,301
Indian Territory	.....	.....
Iowa	1,911,896	1,624,615
Kansas	1,427,096	996,096
Kentucky	1,858,635	1,648,690
Louisiana	1,118,587	939,946
Maine	661,086	648,936
Maryland	1,042,390	934,943
Massachusetts	2,238,943	1,783,085
Michigan	2,093,889	1,636,937
Minnesota	1,301,826	780,773
Mississippi	1,289,600	1,131,597
Missouri	2,679,184	2,168,380
Montana	132,159	39,159
Nebraska	1,058,910	452,402
Nevada	45,761	62,266
New Hampshire	376,530	346,991
New Jersey	1,444,933	1,131,116
New Mexico	153,593	119,565
New York	5,997,853	5,082,871
North Carolina	1,617,947	1,399,750
North Dakota	182,719	36,909
Ohio	3,672,316	3,198,062
Oklahoma	61,834	.....
Oregon	313,767	174,768
Pennsylvania	5,258,014	4,282,891
Rhode Island	345,506	276,531
South Carolina	1,151,149	995,577
South Dakota	328,808	98,268
Tennessee	1,767,518	1,542,359
Texas	2,235,523	1,591,749
Utah	207,905	143,963
Vermont	332,422	332,286
Virginia	1,655,980	1,512,565
Washington	349,390	75,116
West Virginia	762,794	618,457
Wisconsin	1,686,880	1,315,497
Wyoming	60,705	20,789
Total population of U. S.	62,622,250	50,155,783

POPULATION OF PRINCIPAL CITIES.

	1890.	1880.
Albany, N. Y.	94,923	90,758
Allegheny, Pa.	105,287	78,682
Atlanta, Ga.	65,533	37,409
Baltimore, Md.	434,439	332,313
Boston, Mass.	448,477	362,839
Brooklyn, N. Y.	806,343	566,663
Buffalo, N. Y.	255,664	155,134
Cambridge, Mass.	70,028	52,669
Camden, N. J.	58,313	41,659
Charleston, S. C.	54,955	49,984
Chicago, Ill.	1,099,850	503,185
Cincinnati, O.	296,908	255,139
Cleveland, O.	261,353	160,146
Columbus, O.	88,150	51,647
Dayton, O.	61,220	38,678
Denver, Col.	106,713	35,629
Des Moines, Ia.	50,093	22,408
Detroit, Mich.	205,876	116,340
Evansville, Ind.	50,756	29,280
Fall River, Mass.	74,398	48,961
Grand Rapids, Mich.	60,278	32,016
Hartford, Conn.	53,230	42,015
Indianapolis, Ind.	105,436	75,056
Jersey City, N. J.	163,003	120,722
Kansas City, Mo.	132,716	55,785
Lincoln, Neb.	55,154	13,003
Louisville, Ky.	161,129	123,758
Lowell, Mass.	77,696	59,475
Lynn, Mass.	55,727	38,274
Memphis, Tenn.	64,495	33,592
Milwaukee, Wis	204,468	115,587
Minneapolis, Minn.	164,738	46,887
Nashville, Tenn.	76,168	43,350
Newark, N. J.	181,830	136,508
New Haven, Conn.	81,298	62,882
New Orleans, La.	242,039	216,090
New York, N. Y.	1,515,301	1,206,299
Omaha, Neb.	140,452	30,518
Paterson, N. J.	78,347	51,031
Philadelphia, Pa	1,046,964	847,170
Pittsburgh, Pa.	238,617	156,389
Providence, R. I.	132,146	104,857
Reading, Pa.	58,661	43,278
Richmond, Va.	81,388	63,600
Rochester, N. Y.	133,896	89,366
Saint Joseph, Mo.	52,324	32,431
Saint Louis, Mo.	451,770	350,518
Saint Paul, Minn.	133,156	41,473
San Francisco, Cal.	298,997	233,959
Scranton, Pa.	75,215	45,850
Syracuse, N. Y.	88,143	51,792
Toledo, O.	81,434	50,137
Trenton, N. J.	57,458	29,910
Troy, N. Y.	60,956	56,747
Washington, D. C.	230,392	177,624
Wilmington, Del.	61,431	42,478
Worcester, Mass	84,655	58,291

RELATIVE RANK OF CITIES.

In 1870 there were but fourteen cities each containing more than 100,000 inhabitants. In 1880 this number had increased to twenty, and in 1890 to twenty-eight.

In 1880 there was but one city, New York, which had a population in excess of a million. In 1890 there were three, New York, Chicago, and Philadelphia.

The number and relative rank of cities having a population of 100,000 or more at the date of each of these censuses are set forth in the following table.

	RANK.		
	1890.	1880.	1870.
New York, N. Y.	1	1	1
Chicago, Ill.	2	4	5
Philadelphia, Pa.	3	2	2
Brooklyn, N. Y.	4	3	3
Saint Louis, Mo.	5	6	4
Boston, Mass.	6	5	7
Baltimore, Md.	7	7	6
San Francisco, Cal.	8	9	10
Cincinnati, O.	9	8	8
Cleveland, O.	10	11	..
Buffalo, N. Y.	11	13	11
New Orleans, La.	12	10	9
Pittsburgh, Pa.	13	12	..
Washington, D. C.	14	14	12
Detroit, Mich.	15	18	..
Milwaukee, Wis.	16	19	..
Newark, N. J.	17	15	13
Minneapolis, Minn.	18	..	..
Jersey City, N. J.	19	17	..
Louisville, Ky.	20	16	14
Omaha, Neb.	21	..	..
Rochester, N. Y.	22	..	..
Saint Paul, Minn.	23	..	..
Kansas City, Mo.	24	..	..
Providence, R. I.	25	20	..
Denver, Col.	26	..	..
Indianapolis, Ind.	27	..	..
Allegheny City, Pa.	28	..	..

VALUES IN UNITED STATES MONEY

OF THE

PURE GOLD OR SILVER

REPRESENTING RESPECTIVELY THE MONETARY UNITS AND STANDARD COINS OF FOREIGN COUNTRIES.

The first section of the Act of March 3, 1873, provides "that the value of Foreign Coin, as expressed in the money of account of the United States, shall be that of the pure metal of such coin of standard value," and that "the values of the standard coins in circulation of the various nations of the world shall be estimated annually by the Director of the Mint, and be proclaimed on the first day of January by the Secretary of the Treasury."

The estimates of values contained in the following table are those made by the Director of the Mint, January 1st, 1890, in compliance with the above stated provisions of law.

COUNTRY.	MONETARY UNIT.	STANDARD.	VALUE. D.	C.	M.
Argentine Repub.	Peso	Gold & silv.	0	96	5
Austria	Florin	Silver	0	34	3
Belgium	Franc	Gold & silv.	0	19	3
Bolivia	Boliviano	Silver	0	69	8
Brazil	Milreis of 1000 reis.	Gold	0	54	6
British America	Dollar	Gold	1	0	0
Cent'l Am. States	Peso	Silver	0	69	8
Chili	Peso	Gold & silv.	0	91	2
China	Tael.. Shanghai..	Silver	1	3	1
	Tael.. Haikwan.. (Customs).	Silver	1	14	8
Cuba	Peso	Gold & silv.	0	92	6
Denmark	Crown	Gold	0	26	8
Ecuador	Sucre	Silver	0	69	8
Egypt	Pound (100 piastres)	Gold	4	94	3
France	Franc	Gold & silv.	0	19	3
German Empire	Mark	Gold	0	23	8
Great Britain	Pound sterling	Gold	4	86	6½
Greece	Drachma	Gold & silv.	0	19	3
Hayti	Gourde	Gold & silv.	0	96	5
India	Rupee of 16 annas.	Silver	0	33	2
Italy	Lira	Gold & silv.	0	19	3
Japan	Yen	Gold	0	99	7
Japan	Yen	Silver	0	75	2
Liberia	Dollar	Gold	1	0	0
Mexico	Dollar	Silver	0	75	8
Netherlands	Florin	Gold & silv.	0	40	2
Norway	Crown	Gold	0	26	8
Peru	Sol	Silver	0	69	8
Portugal	Milreis of 1000 reis.	Gold	1	8	0
Russia	Roubl. of 100 cop'ks	Silver	0	55	8
Spain	Peseta of 100 centim.	Gold & silv.	0	19	3
Sweden	Crown	Gold	0	26	8
Switzerland	Franc	Gold & silv.	0	19	3
Tripoli	Mahbub of 20 piast's	Silver	0	62	9
Turkey	Piastre	Gold	0	4	4
U. S. of Colombia	Peso	Silver	0	69	8
Venezuela	Bolivar	Silver	0	14	0

LEGAL HOLIDAYS.

NOTE.—Sunday, July 4 and December 25 are legal holidays in all the States. Other holidays in the different States are noted below:

In most of the States when the holiday falls on Sunday the Monday following is the holiday. Notes must be paid on the Saturday preceding.

ALABAMA—Jan. 1, Feb. 22.

ARIZONA—Jan. 1, Feb. 22, May 30, any day of thanksgiving or general territorial election, or special election called by the Governor.

CALIFORNIA—Jan. 1, Feb. 22, May 30, Sept. 9, Thanksgiving, a State or general election.

COLORADO—Jan. 1, Feb. 22, May 30, Thanksgiving.

CONNECTICUT—Jan. 1, Feb. 22, May 30, Sept. 1, Thanksgiving, Fast day.

DELAWARE—Jan. 1, Feb. 22, Thanksgiving.

FLORIDA—Jan. 1, Feb. 22, any general election day, Thanksgiving.

GEORGIA—Jan. 1, Feb. 22, April 26, any Thanksgiving.

IDAHO—Same as Arizona.

ILLINOIS—Jan. 1, Feb. 22, May 30, Election Day, Thanksgiving.

INDIANA—Jan. 1, public fast, Thanksgiving.

IOWA—Jan. 1, May 30, Thanksgiving.

KANSAS—Jan. 1, May 30, public fast, Thanksgiving.

KENTUCKY- Jan. 1, Feb. 22, public fast, Thanksgiving.

LOUISIANA—Jan. 1 and 8, Feb. 22, Mardi Gras, March 4 in New Orleans, and Good Friday.

MAINE—Jan. 1, Feb. 22, May 30, public fast, Thanksgiving.

MARYLAND—Jan. 1, Good Friday, Feb. 22, Thanksgiving, or general and Congressional election days.

MASSACHUSETTS—Feb. 22, Fast day, May 30, first Monday in Sept., Thanksgiving,

MICHIGAN—Jan. 1, Feb. 22, May 30, and any day appointed by the Governor or President for fasting and thanksgiving.

MINNESOTA—Jan. 1, Feb. 22. Good Friday, Thanksgiving.

MISSISSIPPI—Jan. 1.

MISSOURI—Jan. 1, Feb. 22, any general or State election day, any Thanksgiving day.

MONTANA—Jan. 1, Feb. 22, May 30, public fast, and Thanksgiving.

NEBRASKA—Jan. 1, Feb, 22, April 22, May 30, Sept. 1, public fast and Thanksgiving.

NEVADA—Jan. 1, Feb. 22, and Thanksgiving day.

NEW HAMPSHIRE—Feb. 22, Fast day, May 30, Thanksgiving, or any day on which a general election is held for members of the Legislature.

NEW JERSEY—Jan. 1, Feb 22, May 30, Sept. 1, Thanksgiving day, and any general election day for members of the Assembly. When these fall on Monday notes and drafts are payable on Tuesday; and when they fall on Sunday the Monday following is a legal holiday, and bills become due the Tuesday following.

NEW MEXICO—Jan. 1 and all days for fasting or thanksgiving. Notes due on holidays are payable on the next business day thereafter.

NEW YORK—Jan. 1, Feb. 22, May 30, the first Monday of Sept. (Labor day), any general election day, every Saturday from noon until midnight, which is designated a half holiday, and any day appointed or recommended by the Governor or President as a day of thanksgiving, or fasting and prayer, or other religious observance.

NORTH CAROLINA—Jan. 1, Feb. 22, May 10, May 20, Thanksgiving. When legal holidays are on Sunday the Monday following is a holiday, and notes due on that day are payable on Tuesday. But when the holiday is on Saturday, notes due on Sunday following are payable on Monday.

NORTH DAKOTA—Jan. 1, Feb. 22, May 30, Thanksgiving, public fast, and general State or National election.

OHIO—Jan. 1, Feb. 22, May 30, Thanksgiving.

OREGON—Jan. 1, Feb. 22, May 30, first Saturday in June, public fast, Thanksgiving, and every general election day.

PENNSYLVANIA—Jan. 1, Feb. 22, Good Friday, Sept. 1, Thanksgiving, Decoration Day. But if the latter falls on Sunday the Saturday preceding is to be observed as the holiday; and notes falling due on that day or the Sunday must be paid on Friday, or protested on that day.

RHODE ISLAND—Feb. 22, May 30, Thanksgiving.

SOUTH CAROLINA—Jan. 1, Feb. 22, National Thanksgiving, general election days.

SOUTH DAKOTA—See North Dakota.

TENNESSEE—Jan. 1, Thanksgiving.

TEXAS—Jan. 1, Feb. 22, March 2, April 21, and all days appointed by the President or the Governor as days of fasting or thanksgiving, and every State election day.

UTAH—Jan. 1, Feb. 22, May 30, July 24, and Thanksgiving and Fast days.

VERMONT—Jan. 1, May 30, Thanksgiving.

VIRGINIA—Jan. 1, Feb. 22, Fast day, Thanksgiving.

WASHINGTON—Jan. 1, Feb. 22, Decoration Day, Thanksgiving, days of general and special election for State and National officers.

WEST VIRGINIA—Jan. 1, Feb. 22, or a day of National thanksgiving.

WISCONSIN—Jan. 1, Feb. 22, May 30, June 10, Thanksgiving, general election day.

WYOMING—Jan. 1, Feb. 22, May 30, Thanksgiving.

INTEREST LAWS OF ALL THE STATES.

States and Territories.	Penalty of Usury.	Legal.	Special.
Alabama	Loss of interest	8	.....
Arizona	No Penalty.....	10	No limit.
Arkansas.....	Forfeiture of principal & interest.	6	10 per ct.
California	No penalty	7	No limit.
Colorado	No penalty	10	No limit.
Connecticut....	No penalty	6	6 per ct.
Dakota	Forfeiture of contract	7	12 per ct.
Delaware.....	Forfeiture of contract	6	6 per ct.
District of Col..	Forfeiture of all interest.....	6	10 per ct.
Florida	No penalty	8	No limit.
Georgia	Forfeiture of excess	7	8 per ct.
Idaho.....	Forf'ture of 3 times excess of int.	10	18 per ct.
Illinois	Forfeiture of all interest.....	6	8 per ct.
Indiana	Forfeiture of int. over 6 per cent.	6	8 per ct.
Iowa.....	Forfeiture of interest and costs..	6	10 per ct.
Kansas	Forfeiture of excess over 12 per ct.	7	12 per ct.
Kentucky	Forfeiture of excess	6	6 per ct.
Louisiana	Forfeiture of interest	5	8 per ct.
Maine	No penalty	6	No limit.
Maryland	Forfeiture of excess	6	6 per ct.
Massachusetts .	No penalty—6 per ct. on judg'ts.	6	No limit.
Michigan	Forfeiture of excess	7	10 per ct.
Minnesota.....	Forfeiture of contract.	7	10 per ct.
Mississippi	Forfeiture of all interest.....	6	10 per ct.
Missouri	Forfeiture of all interest	6	10 per ct.
Montana	No penalty	10	No limit.
Nebraska.....	Forfeiture of all interest & costs.	7	10 per ct.
Nevada.....	No penalty	10	No limit.
New Hampshire	Forfeiture of 3 times excess of int.	6	6 per ct.
New Jersey	Forfeiture of all interest.....	6	6 per ct..
New Mexico ...	No penalty	6	12 per ct.
New York.....	Forfeiture of contract.*	6	6 per ct.
North Carolina.	Forfeiture of double am't of int.	6	8 per ct.
Ohio	Forfeiture of excess.	6	8 per ct.
Oregon	Forfeiture of prin., int. & costs..	8	10 per ct.
Pennsylvania ..	Forfeiture of excess, Act of 1858.	6	6 per ct.
Rhode Island ..	Forfeiture, unless by contract.†.	6	No limit.
South Carolina.	Forfeiture of interest	7	10 per ct.
Tennessee	Forfeiture of over 6 per cent.....	6	6 per ct.
Texas	Forfeiture of interest.....	8	12 per ct.
Utah	No penalty	10	No limit.
Vermont	Forfeiture of excess	6	7 per ct.
Virginia.....	Forfeiture of excess	6	6 per ct.
Washington	No penalty	10	No limit.
West Virginia..	Forfeiture of excess	6	6 per ct.
Wisconsin.....	Forfeiture of all interest	7	10 per ct.
Wyoming	No penalty	12	No limit.

* Also punishable as a misdemeanor. Banks forfeit interest only, or double the interest if charged in advance.
† Also 6 per cent. on judgments.

PRESIDENTS OF THE UNITED STATES.

No.	NAMES.	Born.	Inaugurated.	Term of Office.	Died.	Native of	Residence when elected.	Political Party.
1	George Washington	Feb. 22, 1732	April 30, 1789	8 years.....	Dec. 14, 1799	Virginia.	Virginia.	Federal.
2	John Adams.....	Oct. 31, 1735	Mar. 4, 1797	4 "	July 4, 1826	Mass.	Mass.	"
3	Thomas Jefferson...	April 2, 1743	" 4, 1801	8 "	" 4, 1826	Virginia.	Virginia.	Republican.
4	James Madison.....	Mar. 16, 1751	" 4, 1809	8 "	June 28, 1836	"	"	"
5	James Monroe.....	April 28, 1758	" 4, 1817	8 "	July 4, 1831	"	"	"
6	John Quincy Adams.	July 11, 1767	" 4, 1825	4 "	Feb. 23, 1848	Mass.	Mass.	Coalition.
7	Andrew Jackson	Mar. 15, 1767	" 4, 1829	8 "	June 8, 1845	S. Carolina.	Tennessee.	Democrat.
8	Martin Van Buren.	Dec. 5, 1782	" 4, 1837	4 "	July 24, 1862	New York.	New York.	"
9	Wm. H. Harrison ...	Feb. 9, 1773	" 4, 1841	1 month	April 4, 1841	Virginia.	Ohio.	Whig.
10	John Tyler.....	Mar. 29, 1790	April 6, 1841	3 yrs. 11 mos.	Jan. 18, 1862	"	Virginia.	"
11	James K. Polk	Nov. 2, 1795	Mar. 4, 1845	4 years.....	June 15, 1849	N. Carolina.	Tennessee.	Democrat.
12	Zachary Taylor.....	Sept. 24, 1784	" 4, 1849	1 year 4 mos..	July 9, 1850	Virginia.	Louisiana.	Whig.
13	Millard Fillmore ..	Feb. 7, 1800	July 9, 1850	2 years 8 mos.	Mar. 7, 1874	New York.	New York.	"
14	Franklin Pierce....	Nov. 23, 1804	Mar. 4, 1853	4 years.....	Oct. 8, 1869	N. Hamp.	N. Hamp.	Democrat.
15	James Buchanan....	April 23, 1791	" 4, 1857	4 "	June 1, 1868	Penn.	Penn.	"
16	Abraham Lincoln...	Feb. 12, 1809	" 4, 1861	4 yrs. 40 days.	April 15, 1865	Kentucky.	Illinois.	Republican.
17	Andrew Johnson....	Dec. 29, 1808	April 15, 1865	3 yrs. 10½ mos.	July 31, 1875	N. Carolina.	Tennessee.	"
18	Ulysses S. Grant ...	April 27, 1822	Mar. 4, 1869	8 years.....	July 23, 1885	Ohio.	Illinois.	"
19	Rutherf'd B. Hayes	Oct. 4, 1822	" 5, 1877	4 "	.....	"	Ohio.	"
20	James A. Garfield..	Nov. 19, 1831	" 4, 1881	6½ months....	Sept. 19, 1881	"	"	"
21	Chester A. Arthur.	Oct. 5, 1830	Sept. 20, 1881	3 yrs. 5½ mos.	Nov. 18, 1886	Vermont.	New York.	"
22	Grover Cleveland..	Mar. 18, 1837	Mar. 4, 1885	4 years.....	.....	New Jersey.	" "	Democrat.
23	Benjamin Harrison.	Aug. 20, 1833	" 4, 1889	.....	.....	Ohio.	Indiana.	Republican.

STANDARD TIME.

In this Almanac the risings and settings of the Sun and Moon are given in local mean time, as heretofore. The Tides are given in Standard Time.

To change to Standard Time add or subtract the *minutes* as given below, according as they are marked *plus* or *minus*.

Standard Time Divisions as adopted by the Railroads.

Eastern Standard—75th Meridian. Canada, between Quebec and Detroit,—U. S. east of Buffalo, N. Y.; Pittsburg, Pa.; Wheeling and Huntington, W. Va.; Bristol, Tenn.; Charlotte, N. C., and Augusta, Ga.

Central Standard—90th Meridian. West from "Eastern" limits, as above, to Broadview, Canada; to the Missouri River in Dakota; North Platte and McCook, Nebraska; Wallace and Dodge City, Kansas; Toyah and Sanderson, Texas.

Mountain Standard—105th Meridian. West from "Central" limits to Heron, Montana; Ogden, Utah; Needles and Yuma, Arizona.

Pacific Standard—120th Meridian. West from "Mountain" limits to coast.

Correction for the following Cities.

Eastern Standard.

75° Longitude.

	Minutes.
Bangor, Me.	— 25
Augusta, Me.	— 21
Portland, Me.	— 19
Boston, Mass.	— 16
Newport, R. I.	— 15
Providence, R. I.	— 14
Concord, N. H.	— 14
New London, Conn.	— 11
Springfield, Mass.	— 10
Montpelier, Vt.	— 10
Hartford, Conn.	— 9
Montreal, Que.	— 6
Albany, N. Y.	— 5
New York, N. Y	— 4
Utica, N. Y.	+ 1
Philadelphia, Pa.	+ 1
Syracuse, N. Y.	+ 5
Baltimore, Md.	+ 6
Washington, D. C.	+ 8
Rochester, N. Y.	+ 11
Buffalo, N. Y.	+ 16
Pittsburg, Pa.	+ 20

Central Standard.

90° Longitude.

	Minutes.
Cleveland, Ohio	— 33
Columbus, Ohio	— 28
Detroit, Mich.	— 28
Toledo, Ohio	— 26
Dayton, Ohio	— 23
Cincinnati, Ohio	— 22
Louisville, Ky.	— 18
Indianapolis, Ind.	— 16
Chicago, Ill.	— 10
Milwaukee, Wis.	— 8
Springfield, Ill.	— 2
Memphis, Tenn.	0
New Orleans, La.	0
St. Louis, Mo.	+ 1
Rock Island, Ill.	+ 3
Dubuque, Iowa	+ 3
Burlington, Iowa	+ 5
St. Paul, Minn.	+ 12
Des Moines, Iowa	+ 14
Kansas City, Mo.	+ 18
Galveston, Texas	+ 19
Omaha, Neb.	+ 24

Mountain Standard.

105° Longitude.

Denver, Col.	0
Salt Lake City, Utah,	+ 28

Pacific Standard.

120° Longitude.

Sacramento, Cal.	+ 6
San Francisco, Cal.	+ 10

HIGH TIDE.

(STANDARD TIME.)

Day of Mo.	JANUARY.		FEBRUARY.		MARCH.	
	Bost. Tide.	N. Y. Tide.	Bost. Tide.	N. Y. Tide.	Bost. Tide.	N. Y. Tide.
	Morning.	Morning.	Morning.	Morning.	Morning.	Morning.
1	10 11	7 8	11 45	8 41	10 40	7 35
2	11 9	8 3	0 7	9 27	11 20	8 14
3	.....	9 0	0 49	10 7	11 58	8 56
4	0 28	9 51	1 29	10 43	0 15	9 32
5	1 17	10 36	2 7	11 20	0 52	10 8
6	2 3	11 19	2 45	.....	1 28	10 41
7	2 45	.....	3 23	0 22	2 5	11 18
8	3 26	0 24	4 6	1 5	2 44	.....
9	4 9	1 8	4 55	1 54	3 27	0 26
10	4 55	1 54	5 50	2 48	4 17	1 16
11	5 43	2 41	6 50	3 48	5 15	2 14
12	6 34	3 31	7 52	4 48	6 18	3 16
13	7 27	4 24	8 51	5 48	7 24	4 20
14	8 22	5 18	9 46	6 44	8 24	5 20
15	9 16	6 13	10 37	7 31	9 19	6 17
16	10 8	7 5	11 21	8 15	10 10	7 6
17	10 58	7 52	.....	9 0	10 53	7 48
18	11 42	8 38	0 23	9 42	11 34	8 29
19	0 4	9 24	1 4	10 21	.....	9 13
20	0 48	10 6	1 45	11 1	0 36	9 55
21	1 30	10 46	2 28	11 48	1 20	10 39
22	2 13	11 28	3 16	0 14	2 9	11 30
23	2 54	.....	4 12	1 11	3 2	.....
24	3 40	0 39	5 19	2 17	4 3	1 2
25	4 32	1 31	6 31	3 29	5 14	2 12
26	5 32	2 30	7 45	4 42	6 27	3 25
27	6 40	3 37	8 52	5 49	7 36	4 32
28	7 50	4 46	9 49	6 47	8 36	5 34
29	8 59	5 57	.....	.....	9 27	6 25
30	10 2	7 0	.....	.....	10 11	7 8
31	10 58	7 52	.....	.....	10 49	7 44

HIGH TIDE.

(STANDARD TIME.)

Day of Mo.	APRIL.		MAY.		JUNE.	
	Bost. Tide.	N. Y. Tide.	Bost. Tide.	N. Y. Tide.	Bost. Tide.	N. Y. Tide.
	Morning.	Morning.	Morning.	Morning.	Morning.	Morning.
1	11 25	8 19	11 27	8 21	0 2	9 23
2	11 59	8 57	.....	9 2	0 46	10 7
3	0 16	9 33	0 24	9 43	1 32	10 49
4	0 53	10 9	1 6	10 23	2 17	11 36
5	1 32	10 46	1 50	11 7	3 3	0 0
6	2 13	11 30	2 37	11 58	3 50	0 49
7	2 58	.....	3 26	0 24	4 41	1 39
8	3 49	0 48	4 19	1 18	5 34	2 32
9	4 46	1 45	5 16	2 15	6 29	3 27
10	5 48	2 46	6 15	3 13	7 27	4 23
11	6 52	3 49	7 11	4 8	8 25	5 21
12	7 51	4 48	8 5	5 2	9 23	6 21
13	8 45	5 42	8 58	5 55	10 22	7 18
14	9 34	6 33	9 49	6 47	11 20	8 15
15	10 21	7 17	10 40	7 35	.....	9 14
16	11 5	7 59	11 30	8 25	0 45	10 10
17	11 49	8 46	.....	9 23	1 40	11 0
18	0 12	9 36	0 53	10 18	2 31	11 52
19	1 2	10 25	1 51	11 15	3 19	0 17
20	1 58	11 22	2 48	.....	4 8	1 7
21	2 56	.....	3 45	0 44	4 56	1 54
22	3 59	0 58	4 43	1 42	5 46	2 44
23	5 7	2 5	5 40	2 38	6 35	3 32
24	6 11	3 9	6 34	3 31	7 26	4 22
25	7 12	4 9	7 24	4 21	8 15	5 12
26	8 6	5 3	8 10	5 7	9 3	6 1
27	8 53	5 50	8 55	5 52	9 51	6 49
28	9 35	6 33	9 37	6 35	10 40	7 35
29	10 14	7 11	10 19	7 16	11 24	8 18
30	10 51	7 45	11 1	7 54	.....	9 6
31	.....	.....	11 41	8 38	.....	.....

HIGH TIDE.

(STANDARD TIME.)

Day of Mo.	JULY.		AUGUST.		SEPTEMBER.	
	Bost. Tide.	N. Y. Tide.	Bost. Tide.	N. Y. Tide.	Bost. Tide.	N. Y. Tide.
	Morning.	Morning.	Morning.	Morning.	Morning.	Morning.
1	0 29	9 49	1 27	10 42	2 24	11 43
2	1 13	10 29	2 7	11 22	3 12	0 10
3	1 55	11 10	2 48	.....	4 9	1 9
4	2 36	11 54	3 32	0 31	5 19	2 17
5	3 18	0 16	4 26	1 24	6 35	3 33
6	4 4	1 3	5 27	2 25	7 50	4 47
7	4 56	1 54	6 39	3 36	8 55	5 53
8	5 52	2 50	7 53	4 50	9 52	6 50
9	6 54	3 52	9 4	6 2	10 40	7 35
10	8 2	4 59	10 7	7 4	11 20	8 14
11	9 9	6 8	11 1	7 55	11 58	8 55
12	10 14	7 10	11 46	8 43	0 16	9 33
13	11 13	8 8	0 8	9 27	0 53	10 8
14	.....	9 4	0 49	10 6	1 30	10 45
15	0 31	9 54	1 28	10 42	2 10	11 25
16	1 19	10 37	2 7	11 21	2 51	.....
17	2 3	11 19	2 46	.....	3 39	0 38
18	2 45	.....	3 27	0 25	4 33	1 32
19	3 26	0 24	4 13	1 12	5 33	2 31
20	4 10	1 9	5 7	2 5	6 36	3 33
21	4 57	1 55	6 5	3 3	7 38	4 35
22	5 47	2 45	7 8	4 5	8 35	5 32
23	6 42	3 39	8 8	5 5	9 25	6 23
24	7 38	4 35	9 4	6 2	10 10	7 7
25	8 35	5 32	9 55	6 53	10 52	7 46
26	9 29	6 27	10 42	7 37	11 31	8 26
27	10 19	7 16	11 22	8 16	.....	9 9
28	11 6	7 59	.....	8 58	0 32	9 52
29	11 47	8 44	0 19	9 37	1 17	10 37
30	0 8	9 27	0 59	10 16	2 7	11 29
31	0 48	10 6	1 40	10 55	.....	.....

HIGH TIDE.

(STANDARD TIME.)

Day of Mo.	OCTOBER.		NOVEMBER.		DECEMBER.	
	Bost. Tide.	N. Y. Tide.	Bost. Tide.	N. Y. Tide.	Bost. Tide.	N. Y. Tide.
	Morning.	Morning.	Morning.	Morning.	Morning.	Morning.
1	3 3	.....	5 9	2 8	5 38	2 36
2	4 6	1 5	6 12	3 9	6 31	3 28
3	5 18	2 16	7 10	4 7	7 21	4 18
4	6 31	3 28	8 3	5 0	8 9	5 6
5	7 38	4 34	8 50	5 47	8 56	5 54
6	8 35	5 33	9 32	6 30	9 42	6 40
7	9 25	6 23	10 14	7 11	10 26	7 23
8	10 9	7 6	10 54	7 48	11 9	8 4
9	10 49	7 43	11 31	8 26	11 51	8 48
10	11 24	8 19	.....	9 10	0 13	9 34
11	.....	8 58	0 33	9 53	0 57	10 15
12	0 19	9 36	1 17	10 34	1 41	10 57
13	0 58	10 15	2 2	11 20	2 24	11 41
14	1 40	10 56	2 48	.....	3 6	0 4
15	2 25	11 44	3 37	0 36	4 0	0 49
16	3 12	0 10	4 27	1 26	4 37	1 36
17	4 4	1 3	5 21	2 19	5 28	2 26
18	5 2	2 0	6 15	3 13	6 21	3 19
19	6 2	3 0	7 9	4 6	7 20	4 17
20	7 0	3 57	8 1	4 58	8 21	5 17
21	7 55	4 51	8 54	5 51	9 22	6 20
22	8 45	5 43	9 46	6 44	10 24	7 21
23	9 33	6 31	10 40	7 35	11 23	8 17
24	10 18	7 15	11 32	8 27	.....	9 18
25	11 3	7 57	0 0	9 27	0 48	10 13
26	11 48	8 45	0 57	10 23	1 43	11 2
27	0 12	9 35	1 55	11 19	2 32	11 52
28	1 4	10 28	2 53	.....	3 18	0 17
29	2 1	11 25	3 47	0 46	4 6	1 5
30	3 0	.....	4 43	1 42	4 55	1 53
31	4 3	1 2	.....	.....	5 45	2 43

TIDE TABLE

(The following values are derived from late determinations of the UNITED STATES COAST SURVEY.)

To find the time (Standard Time) of High Water at any of the following places, add or subtract the hours and minutes opposite the name of place in the following Table, to or from the hours and minutes of High Water at NEW YORK for the required day, as found in the *Calendar Page.*

EASTERN STANDARD.		H.	M.	Mean range. Feet.
Eastport, Me.	add	2	33	18.2
Bar Harbor, Me.	"	2	27	10.4
Portland, Me.	"	2	55	9.1
Portsmouth, N. H.	"	3	3	8.6
Isle of Shoals, N. H.	"	2	57	8.7
Newburyport, Mass.	"	3	16	7.5
Gloucester, Mass.	"	2	44	8.9
Salem, Mass.	"	2	54	9.2
Nahant, Mass.	"	2	50	9.4
Plymouth, Mass.	"	2	59	10.2
Provincetown, Mass.	"	3	0	9.2
Nantucket, Mass.	"	4	15	3.0
Vineyard Haven, Mass.	"	3	32	1.6
Wood's Hole, North Side, Mass.	sub.	0	21	4.0
Wood's Hole, South Side, Mass.	add	0	14	1.6
New Bedford Entrance (Dumpling Rock), Mass.	sub.	0	20	3.7
Newport, R. I.	"	0	33	3.9
Point Judith, R. I.	"	0	45	3.1
Sandy Hook, N. J.	"	0	32	4.7
Watch Hill, R. I.	add	0	44	2.7
Stonnington, Conn.	"	0	52	2.7
New London, Conn.	"	1	14	2.6
New Haven, Conn.	"	2	57	6.0
Bridgeport, Conn.	"	3	1	6.5
Montauk Point, L. I.	"	0	4	1.9
Throg's Neck, N. Y.	"	3	12	7.3
Cape May Landing, N. J.	"	0	16	4.8
Newcastle, Del.	"	3	52	6.5
Philadelphia, Penn.	"	5	36	6.0
Annapolis, Md.	sub.	3	19	0.9
Blatimore, Md.	"	1	24	1.3
Richmond, Va.	"	3	25	3.6
Hatteras Inlet, N. C.	"	0	56	2.0
Beaufort, N. C.	"	0	35	2.8
Charleston (C. H. Wharf), S C.	"	0	19	5.1
CENTRAL STANDARD.				
Fort Pulaski (Savannah Ent.), Ga.	"	1	21	6.9
Savannah (Dry Dock Wharf), Ga.	"	0	26	6.5
St. Augustine, Fla.	"	0	17	4.2
Key West, Fla.	add	0	26	1.2
Tampa Bay (Egmont Key), Fla.	"	2	49	1.4
Cedar Keys (Depot Key), Fla.	"	4	52	2.6

SHORT METHOD

For Calculating Interest.

Multiply the principal by as many hundreds as there are days, and

For	4	per	cent	.....	Divide	by	90
"	5	"	"	.....	"	"	72
"	6	"	"	.....	"	"	60
"	7	"	"	.....	"	"	52
"	8	"	"	.....	"	"	45
"	9	"	"	.....	"	"	40
"	10	"	"	.....	"	"	36
"	12	"	"	.....	"	"	30

EXAMPLE—Interest on $50 for 30 days at 4%. 50 x .30 = 15.00, which divided by 90 = 16⅔ cents—the required result.

FESTIVALS AND FASTS.

Epiphany	Jan.	6
Septuagesima Sunday	Jan.	29
Quinquagesima—Shrove Sunday	Feb.	12
Ash Wednesday	Feb.	15
First Sunday in Lent	Feb.	19
St. Patrick	Mar.	17
Palm Sunday	Mar.	26
Good Friday	Mar.	31
Easter Sunday	April	2
Low Sunday	April	9
Rogation Sunday	May	7
Ascension Day—Holy Thursday	May	11
Pentecost—Whit Sunday	May	21
Trinity Sunday	May	28
Corpus Christi	June	1
St. John Baptist	June	24
Michælmas Day	Sept.	29
St. Andrew	Nov.	30
First Sunday in Advent	Dec.	3
Christmas Day	Dec.	25

THE SEASONS.

	Eastern Standard.	Central Standard.
Vernal Equinox,	Mar. 20, 4h. M.	Mar. 20, 3h. M.
Summer Solstice,	June 21, 0h. M.	June 20, 11h. A.
Autumnal Equinox,	Sept. 22, 2h. A.	Sept. 22, 1h. A.
Winter Solstice,	Dec. 21, 9h. M.	Dec. 21, 8h. M.

	Mountain Standard.	Pacific Standard.
Vernal Equinox,	Mar. 20, 2h. M.	Mar. 20, 1h. M.
Summer Solstice,	June 20, 10h. A.	June 20, 9h. A.
Autumnal Equinox,	Sept. 22, 0h. A.	Sept. 22, 11h. M.
Winter Solstice,	Dec. 21, 7h. M.	Dec. 21, 6h. M.

ECLIPSES FOR THE YEAR.

In the year 1893 there will be two Eclipses, — both of the Sun.

I. A Total Eclipse of the Sun, April 16. Invisible to North America. Visible to South America, the larger part of Africa, southern Europe, and intermediate Atlantic Ocean.

II. An Annular Eclipse of the Sun, October 9. Visible to the western halves of North and South America, (including the West Indies,) the extreme north-eastern tip of Asia, and eastern Pacific Ocean. Invisible east of a line drawn through Bismarck, (Dak.), Omaha, Memphis, and Sapelo Island, (Ga.) The path of the annulus being in the Pacific Ocean. Occurring, as a partial Eclipse, as follows: —

	Standard.	Begins.	Ends.	Digits. Eclipsed.
		H. M.	H. M.	
Lawrence, Kan.....	Central	2 2 A.	2 41 A.	Small.
Galveston, Tex.....	"	1 56 A.	3 36 A.	2
San Antonio, Tex.....	"	1 38 A.	3 33 A.	3
Austin, Tex...	"	1 40 A.	3 31 A.	3
New Orleans, La.....	"	2 27 A.	3 31 A.	1
Mobile, Ala.....	"	2 35 A.	3 25 A.	1
Pensacola, Fla.....	"	2 37 A.	3 25 A.	1
Bismarck, Dak.....	Mountain	0 55 A.	1 18 A.	Slight.
Denver, Col.....	"	0 13 A.	1 56 A.	2
Salt Lake City, Utah ..	"	11 47 M.	1 51 A.	3
Santa Fe, N. Mex.....	"	0 7 A.	2 9 A.	3
Gallatin, Mont,..	"	11 55 M.	1 35 A.	2
San Francisco, Cal. ...	Pacific	10 19 M.	0 55 A.	5
Portland, Ore.....	"	10 25 M.	0 37 A.	4
Victoria, V. C. I.....	"	10 26 M.	0 28 A.	3
Los Angeles, Cal.....	"	10 31 M.	1 8 A.	5
San Diego, Cal.....	"	10 33 M.	1 13 A.	6
Monterey, Cal.....	"	10 22 M.	0 59 A.	6
Virginia City, Nev.....	"	10 28 M.	0 54 A.	5

MORNING AND EVENING STARS.

Mercury will be Evening Star about March 14, July 11, and November 5; and Morning Star about April 28, August 25, and December 14.

Venus will be Morning Star till May 2; and Evening Star the rest of the year.

Jupiter will be Evening Star till April 27; then Morning Star till November 18; and Evening Star again the rest of the year.

CHRONOLOGICAL CYCLES.

Dominical Letter	A.
Epact	12
Lunar Cycle, or Golden Number	13
Solar Cycle	26
Roman Indiction	6
Julian Period	6606

The Calendars for the Latitude of Boston and Chicago

May be used for Central and Southern New England, Central New York, Southern Michigan, Southern Wisconsin, Northern Iowa, Northern Nebraska, South Dakota, and Wyoming.

The Calendars for the Latitude of New York and Philadelphia

May be used for Southern New York, New Jersey, Pennsylvania, Northern Ohio, Northern Indiana, Northern Illinois, Southern Iowa, and Southern Nebraska.

The Calendars for the Latitude of Washington, Cincinnati, etc.

May be used for Delaware, Maryland, the Virginias, Southern Ohio, Southern Indiana, Southern Illinois, Kentucky, Missouri, Kansas, and Colorado.

THE SIZE OF THE SEAS.

	Miles long.
Mediterranean	2,000
Caribbean	1,800
Red	1,400
Black	932
Baltic	600

AREA OF OCEANS IN SQ. MILES.

Pacific	80,000,000
Atlantic	40,000,000
Indian	20,000,000
Southern	10,000,000
Arctic	5,000,000

SIZE OF THE GREAT LAKES.

	Miles long.	Miles wide.
Superior	380	120
Michigan	330	60
Ontario	170	40
Champlain	123	12
Erie	270	50
Huron	250	90
Winnipeg	240	40
Athabaska	200	20

MOON'S PHASES. (In Standard Time.)	EAST'N DIVISION.	CENT. DIVISION.
FULL MOON	2d. 8h. 41m. M.	2d. 7h. 41m. M.
LAST QUARTER...	9d. 5h. 28m. A.	9d. 4h. 28m. A.
NEW MOON	17d. 8h. 28m. A.	17d. 7h. 28m. A.
FIRST QUARTER ..	25d. 1h. 27m. M.	25d. 0h. 27m. M.
FULL MOON	31d. 9h. 11m. A.	31d. 8h. 11m. A.

		LATITUDE OF BOSTON AND CHICAGO. Local Mean Time.		LAT. OF NEW YORK AND PHILA. Local Mean Time.		LAT. OF WASH. CIN. & ST. LOUIS. Local Mean Time.	
Day.	Day of W'k.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.
1	♒	r7 30	6 51	r7 25	6 44	r7 19	6 37
2	MO.	s4 40	rises.	s4 45	rises.	s4 50	rises.
3	TU.	r7 30	5 50	r7 25	5 56	r7 19	6 3
4	WE.	s4 42	7 5	s4 47	7 10	s4 52	7 16
5	TH.	r7 30	8 18	r7 25	8 21	r7 19	8 26
6	FR.	s4 44	9 27	s4 49	9 29	s4 54	9 32
7	SA.	r7 29	10 33	r7 25	10 34	r7 19	10 36
8	♒	s4 46	11 36	s4 51	11 35	s4 56	11 36
9	MO.	r7 29	morn	r7 24	morn	r7 19	morn
10	TU.	s4 48	0 38	s4 53	0 36	s4 58	0 35
11	WE.	r7 28	1 40	r7 24	1 37	r7 18	1 35
12	TH.	s4 50	2 43	s4 55	2 39	s5 0	2 35
13	FR.	r7 28	3 47	r7 23	3 42	r7 18	3 36
14	SA.	s4 53	4 51	s4 57	4 45	s5 2	4 38
15	♒	r7 27	5 52	r7 22	5 45	r7 17	5 38
16	MO.	s4 55	6 46	s5 0	6 39	s5 4	6 32
17	TU.	r7 26	sets.	r7 21	sets.	r7 16	sets.
18	WE.	s4 57	5 29	s5 2	5 34	s5 6	5 41
19	TH.	r7 24	6 41	r7 20	6 45	r7 15	6 50
20	FR.	s5 0	7 53	s5 4	7 56	s5 9	8 0
21	SA.	r7 23	9 4	r7 19	9 5	r7 14	9 8
22	♒	s5 2	10 16	s5 7	10 16	s5 11	10 17
23	MO.	r7 22	11 28	r7 17	11 26	r7 13	11 26
24	TU.	s5 5	morn	s5 9	morn	s5 13	morn
25	WE.	r7 21	0 42	r7 16	0 39	r7 12	0 37
26	TH.	s5 7	1 59	s5 11	1 55	s5 15	1 51
27	FR.	r7 18	3 17	r7 14	3 11	r7 10	3 6
28	SA.	s5 10	4 32	s5 14	4 25	s5 18	4 19
29	♒	r7 16	5 41	r7 13	5 34	r7 9	5 26
30	MO.	s5 13	6 39	s5 16	6 32	s5 20	6 25
31	TU.	r7 14	rises.	r7 11	rises.	r7 7	rises.

MOON'S PHASES. (In Standard Time.)	EAST'N DIVISION.	CENT. DIVISION.
LAST QUARTER...	8d. 3h. 12m. A.	8d. 2h. 12m. M.
NEW MOON.....	16d. 11h. 16m. M.	16d. 10h. 16m. M.
FIRST QUARTER..	23d. 9h. 14m. M.	23d. 8h. 14m. M.

		LATITUDE OF BOSTON AND CHICAGO.		LAT. OF NEW YORK AND PHILA.		LAT. OF WASH. CIN. & ST. LOUIS.	
		Local Mean Time.		Local Mean Time.		Local Mean Time.	
Day.	Day of W'k.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.
1	WE.	r7 13	5 55	r7 10	5 59	r7 6	6 4
2	TH.	s5 17	7 7	s5 20	7 10	s5 24	7 13
3	FR.	r7 11	8 15	r7 8	8 16	r7 4	8 19
4	SA.	s5 19	9 20	s5 22	9 20	s5 26	9 21
5	♒	r7 9	10 24	r7 6	10 23	r7 2	10 22
6	MO.	s5 22	11 27	s5 25	11 24	s5 28	11 23
7	TU.	r7 7	morn	r7 3	morn	r7 0	morn
8	WE.	s5 24	0 30	s5 27	0 26	s5 30	0 23
9	TH.	r7 4	1 30	r7 1	1 28	r6 58	1 23
10	FR.	s5 27	2 37	s5 30	2 31	s5 33	2 25
11	SA.	r7 1	3 39	r6 59	3 32	r6 56	3 25
12	♒	s5 30	4 37	s5 32	4 30	s5 35	4 22
13	MO.	r6 58	5 29	r6 56	5 22	r6 53	5 15
14	TU.	s5 32	6 12	s5 35	6 6	s5 38	6 0
15	WE.	r6 56	6 48	r6 53	6 43	r6 51	6 38
16	TH.	s5 35	sets.	s5 37	sets.	s5 39	sets.
17	FR.	r6 53	6 51	r6 51	6 53	r6 48	6 56
18	SA.	s5 37	8 3	s5 39	8 3	s5 42	8 5
19	♒	r6 50	9 17	r6 48	9 16	r6 46	9 16
20	MO.	s5 40	10 32	s5 42	10 29	s5 44	10 28
21	TU.	r6 47	11 49	r6 45	11 45	r6 43	11 41
22	WE.	s5 42	morn	s5 44	morn	s5 46	morn
23	TH.	r6 44	1 7	r6 42	1 2	r6 40	0 56
24	FR.	s5 45	2 23	s5 47	2 17	s5 48	2 10
25	SA.	r6 41	3 32	r6 39	3 25	r6 38	3 17
26	♒	s5 47	4 32	s5 49	4 25	s5 50	4 18
27	MO.	r6 38	5 21	r6 36	5 15	r6 35	5 8
28	TU.	s5 50	5 59	s5 51	5 54	s5 52	5 49
..	....	.....	.....	.....	.....	.....	.....
..	....	.....	.....	.....	.....	.....	.....
..	....	.....	.....	.....	.....	.....	.....

March 1893

MOON'S PHASES. (In Standard Time.)	EAST'N DIVISION.	CENT. DIVISION.
FULL MOON	2d. 11h. 3m. M.	2d. 10h. 3m. M.
LAST QUARTER...	10d. 0h. 13m. A.	10d. 11h. 13m. M.
NEW MOON	17d. 11h. 33m. A.	17d. 10h. 33m. A.
FIRST QUARTER ..	24d. 4h. 33m. A.	24d. 3h. 33m. A.

		LATITUDE OF BOSTON AND CHICAGO. Local Mean Time.		LAT. OF NEW YORK AND PHILA. Local Mean Time		LAT. OF WASH. CIN. & ST. LOUIS. Local Mean Time.	
Day.	Day of W'k.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.
1	WE.	r6 35	6 29	r6 33	6 25	r6 32	6 22
2	TH.	s5 52	rises.	s5 53	rises.	s5 54	rises.
3	FR.	r6 32	7 3	r6 30	7 4	r6 29	7 5
4	SA.	s5 54	8 9	s5 55	8 8	s5 57	8 8
5	♒	r6 28	9 13	r6 27	9 11	r6 26	9 10
6	MO.	s5 57	10 16	s5 58	10 13	s5 59	10 10
7	TU.	r6 25	11 20	r6 24	11 16	r6 23	11 11
8	WE.	s5 59	morn	s6 0	morn	s6 1	morn
9	TH.	r6 21	0 25	r6 21	0 19	r6 20	0 14
10	FR.	s6 1	1 27	s6 2	1 21	s6 3	1 14
11	SA.	r6 18	2 26	r6 17	2 19	r6 17	2 11
12	♒	s6 4	3 20	s6 4	3 13	s6 5	3 5
13	MO.	r6 15	4 6	r6 14	3 59	r6 14	3 53
14	TU.	s6 6	4 45	s6 6	4 39	s6 7	4 33
15	WE.	r6 11	5 17	r6 11	5 12	r6 11	5 8
16	TH.	s6 8	5 44	s6 9	5 41	s6 9	5 39
17	FR.	r6 8	sets.	r6 8	sets.	r6 8	sets.
18	SA.	s6 11	6 58	s6 11	6 58	s6 11	6 58
19	♒	r6 4	8 15	r6 4	8 13	r6 5	8 12
20	MO.	s6 13	9 34	s6 13	9 30	s6 13	9 27
21	TU.	r6 1	10 54	r6 1	10 49	r6 2	10 44
22	WE.	s6 15	morn	s6 15	morn	s6 15	morn
23	TH.	r5 57	0 13	r5 58	0 7	r5 58	0 0
24	FR.	s6 17	1 26	s6 17	1 19	s6 16	1 12
25	SA.	r5 54	2 29	r5 54	2 22	r5 55	2 14
26	♒	s6 20	3 20	s6 19	3 14	s6 18	3 7
27	MO.	r5 50	4 1	r5 51	3 56	r5 52	3 50
28	TU.	s6 22	4 33	s6 21	4 29	s6 20	4 25
29	WE.	r5 47	4 58	r5 48	4 55	r5 49	4 53
30	TH.	s6 24	5 10	s6 23	5 17	s6 22	5 17
31	FR.	r5 43	5 38	r5 44	5 38	r5 46	5 38

MOON'S PHASES. (In Standard Time.)	EAST'N DIVISION.	CENT. DIVISION.
FULL MOON	1d. 2h. 18m. M.	1d. 1h. 18m. M.
LAST QUARTER...	9d. 6h. 35m. M.	9d. 5h. 35m. M.
NEW MOON	16d. 9h. 34m. M.	16d. 8h. 34m. M.
FIRST QUARTER ..	23d. 0h. 26m. M.	22d. 11h. 26m. A.
FULL MOON	30d. 6h. 23m. A.	30d. 5h. 23m. A.

		LATITUDE OF BOSTON AND CHICAGO. Local Mean Time.		LAT. OF NEW YORK AND PHILA. Local Mean Time.		LAT. OF WASH. CIN. & ST. LOUIS. Local Mean Time.	
Day.	Day of W'k.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.
1	SA.	r5 42	rises.	r5 43	rises.	r5 44	rises.
2	S	s6 28	8 4	s6 26	8 1	s6 25	7 59
3	MO.	r5 38	9 8	r5 39	9 4	r5 41	9 0
4	TU.	s6 30	10 12	s6 28	10 7	s6 27	10 1
5	WE.	r5 35	11 16	r5 36	11 10	r5 38	11 3
6	TH.	s6 32	morn	s6 30	morn	s6 29	morn
7	FR.	r5 31	0 17	r5 33	0 10	r5 35	0 3
8	SA.	s6 34	1 12	s6 33	1 5	s6 31	0 57
9	S	r5 28	2 0	r5 30	1 53	r5 32	1 46
10	MO.	s6 36	2 41	s6 35	2 35	s6 33	2 29
11	TU.	r5 25	3 15	r5 27	3 10	r5 29	3 5
12	WE.	s6 39	3 43	s6 37	3 39	s6 35	3 36
13	TH.	r5 21	4 8	r5 24	4 6	r5 26	4 4
14	FR.	s6 41	4 31	s6 39	4 30	s6 37	4 30
15	SA.	r5 18	4 54	r5 20	4 54	r5 23	4 56
16	S	s6 43	sets.	s6 41	sets.	s6 38	sets.
17	MO.	r5 15	8 29	r5 17	8 25	r5 20	8 20
18	TU.	s6 44	9 53	s6 43	9 47	s6 40	9 41
19	WE.	r5 12	11 12	r5 14	11 5	r5 17	10 58
20	TH.	s6 48	morn	s6 45	morn	s6 42	morn
21	FR.	r5 9	0 21	r5 11	0 14	r5 14	0 6
22	SA.	s6 50	1 18	s6 47	1 11	s6 44	1 4
23	S	r5 6	2 2	r5 9	1 56	r5 12	1 50
24	MO.	s6 52	2 35	s6 49	2 30	s6 46	2 26
25	TU.	r5 3	3 2	r5 6	2 59	r5 9	2 56
26	WE.	s6 54	3 25	s6 51	3 23	s6 48	3 22
27	TH.	r5 0	3 45	r5 3	3 44	r5 7	3 44
28	FR.	s6 56	4 3	s6 53	4 3	s6 50	4 5
29	SA.	r4 57	4 22	r5 0	4 24	r5 4	4 26
30	S	s6 59	4 42	s6 55	4 45	s6 52	4 49
	....	....	....	.....	.....	.....	.....

MOON'S PHASES. (In Standard Time.)	EAST'N DIVISION.	CENT. DIVISION.
LAST QUARTER...	8d. 9h. 24m. A.	8d. 8h. 24m. A.
NEW MOON.....	15d. 5h. 46m. A.	15d. 4h. 46m. A.
FIRST QUARTER..	22d. 9h. 52m. M.	22d. 8h. 52m. M.
FULL MOON	30d. 10h. 22m. M.	30d. 9h. 22m. M.

		LATITUDE OF BOSTON AND CHICAGO. Local Mean Time.		LAT. OF NEW YORK AND PHILA. Local Mean Time.		LAT. OF WASH. CIN. & ST. LOUIS. Local Mean Time.	
Day.	Day of W'k.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.
1	MO.	r4 54	rises.	r4 58	rises.	r5 2	rises.
2	TU.	s7 1	9 5	s6 57	8 59	s6 54	8 53
3	WE.	r4 52	10 7	r4 55	10 0	r4 59	9 53
4	TH.	s7 3	11 4	s7 0	10 57	s6 56	10 49
5	FR.	r4 49	11 55	r4 53	11 48	r4 57	11 40
6	SA.	s7 5	morn	s7 2	morn	s6 57	morn
7	♋	r4 47	0 39	r4 51	0 33	r4 55	0 26
8	MO.	s7 8	1 16	s7 4	1 10	s6 59	1 5
9	TU.	r4 44	1 45	r4 48	1 41	r4 53	1 37
10	WE.	s7 10	2 10	s7 6	2 7	s7 1	2 5
11	TH.	r4 42	2 33	r4 46	2 31	r4 51	2 31
12	FR.	s7 12	2 55	s7 8	2 55	s7 3	2 55
13	SA.	r4 40	3 17	r4 44	3 18	r4 49	3 20
14	♋	s7 14	3 42	s7 10	3 45	s7 5	3 48
15	MO.	r4 38	4 11	r4 42	4 15	r4 47	4 20
16	TU.	s7 16	sets.	s7 11	sets.	s7 7	sets.
17	WE.	r4 36	10 4	r4 40	9 57	r4 45	9 49
18	TH.	s7 18	11 8	s7 13	11 1	s7 8	10 53
19	FR.	r4 34	11 58	r4 39	11 52	r4 44	11 45
20	SA.	s7 20	morn	s7 15	morn	s7 10	morn
21	♋	r4 32	0 37	r4 37	0 32	r4 42	0 27
22	MO.	s7 22	1 7	s7 17	1 3	s7 12	1 0
23	TU.	r4 31	1 31	r4 36	1 29	r4 41	1 27
24	WE.	s7 24	1 51	s7 19	1 50	s7 13	1 50
25	TH.	r4 29	2 10	r4 34	2 10	r4 39	2 11
26	FR.	s7 26	2 28	s7 20	2 29	s7 15	2 32
27	SA.	r4 28	2 48	r4 33	2 51	r4 38	2 54
28	♋	s7 27	3 10	s7 22	3 14	s7 17	3 18
29	MO.	r4 27	3 34	r4 32	3 39	r4 37	3 45
30	TU.	s7 29	rises.	s7 23	rises.	s7 18	rises.
31	WE.	r4 26	8 59	r4 31	8 52	r4 36	8 44

MOON'S PHASES. (In Standard Time.)	EAST'N DIVISION.	CENT. DIVISION.
LAST QUARTER...	7d. 8h. 43m. M.	7d. 7h. 43m. M.
NEW MOON.....	14d. 0h. 51m. M.	13d. 11h. 51m. A.
FIRST QUARTER..	20d. 9h. 37m. A.	20d. 8h. 37m. A.
FULL MOON	29d. 1h. 25m. M.	29d. 0h. 25m. M.

		LATITUDE OF BOSTON AND CHICAGO.		LAT. OF NEW YORK AND PHILA.		LAT. OF WASH. CIN. & ST. LOUIS.	
		Local Mean Time.		Local Mean Time.		Local Mean Time.	
Day.	Day of W'k.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.
1	TH.	r4 25	9 52	r4 30	9 45	r4 36	9 37
2	FR.	s7 31	10 38	s7 26	10 31	s7 20	10 24
3	SA.	r4 24	11 15	r4 30	11 9	r4 35	11 3
4	☵	s7 32	11 46	s7 27	11 41	s7 21	11 37
5	MO.	r4 24	morn	r4 29	morn	r4 35	morn
6	TU.	s7 34	0 13	s7 28	0 9	s7 23	0 7
7	WE.	r4 23	0 36	r4 29	0 34	r4 34	0 32
8	TH.	s7 35	0 57	s7 29	0 56	s7 24	0 56
9	FR.	r4 23	1 18	r4 28	1 19	r4 34	1 18
10	SA.	s7 36	1 40	s7 31	1 42	s7 25	1 45
11	☵	r4 22	2 6	r4 28	2 9	r4 34	2 14
12	MO.	s7 37	2 39	s7 31	2 44	s7 26	2 50
13	TU.	r4 22	3 20	r4 28	3 26	r4 34	3 33
14	WE.	s7 38	sets.	s7 32	sets.	s7 27	sets.
15	TH.	r4 22	9 48	r4 28	9 41	r4 34	9 34
16	FR.	s7 39	10 32	s7 33	10 26	s7 27	10 21
17	SA.	r4 22	11 6	r4 28	11 2	r4 34	10 58
18	☵	s7 39	11 33	s7 34	11 30	s7 28	11 28
19	MO.	r4 23	11 55	r4 28	11 53	r4 34	11 53
20	TU.	s7 40	morn	s7 34	morn	s7 28	morn
21	WE.	r4 23	0 15	r4 29	0 15	r4 34	0 15
22	TH.	s7 40	0 34	s7 34	0 35	s7 29	0 37
23	FR.	r4 24	0 53	r4 29	0 55	r4 35	0 58
24	SA.	s7 40	1 14	s7 35	1 17	s7 29	1 22
25	☵	r4 24	1 38	r4 30	1 43	r4 36	1 48
26	MO.	s7 40	2 7	s7 35	2 13	s7 29	2 19
27	TU.	r4 25	2 41	r4 31	2 47	r4 37	2 55
28	WE.	s7 40	3 23	s7 35	3 30	s7 29	3 39
29	TH.	r4 26	rises.	r4 32	rises.	r4 37	rises.
30	FR.	s7 40	9 16	s7 35	9 10	s7 29	9 4
..	.....	.....	.....	.....	.....	.....	.....

MOON'S PHASES. (In Standard Time.)	EAST'N DIVISION.	CENT. DIVISION.
LAST QUARTER...	6d. 5h. 5m. A.	6d. 4h. 5m. A.
NEW MOON	13d. 7h. 47m. M.	13d. 6h. 47m. M.
FIRST QUARTER ..	20d. 0h. 2m. A.	20d. 11h. 2m. M.
FULL MOON	28d. 3h. 10m. A.	28d. 2h. 10m. A.

Day.	Day of W'k.	LATITUDE OF BOSTON AND CHICAGO. Local Mean Time. Sun R.&S.	Moon R.&S.	LAT. OF NEW YORK AND PHILA. Local Mean Time. Sun R.&S.	Moon R.&S.	LAT. OF WASH. CIN. & ST. LOUIS. Local Mean Time. Sun R.&S.	Moon R.&S.
1	SA.	r4 27	9 49	r4 32	9 44	r4 38	9 39
2	☰	s7 40	10 16	s7 34	10 12	s7 29	10 9
3	MO.	r4 28	10 40	r4 33	10 37	r4 39	10 36
4	TU.	s7 39	11 1	s7 34	11 0	s7 28	10 59
5	WE.	r4 29	11 22	r4 35	11 22	r4 40	11 23
6	TH.	s7 39	11 43	s7 33	11 44	s7 28	11 47
7	FR.	r4 30	morn	r4 36	morn	r4 41	morn
8	SA.	s7 38	0 7	s7 33	0 10	s7 27	0 14
9	☰	r4 32	0 35	r4 38	0 39	r4 43	0 45
10	MO.	s7 37	1 10	s7 32	1 16	s7 26	1 22
11	TU.	r4 33	1 57	r4 39	2 4	r4 44	2 12
12	WE.	s7 36	2 56	s7 31	3 3	s7 26	3 12
13	TH.	r4 35	sets.	r4 40	sets.	r4 45	sets.
14	FR.	s7 35	9 1	s7 30	8 56	s7 24	8 52
15	SA.	r4 37	9 32	r4 42	9 28	r4 47	9 26
16	☰	s7 34	9 57	s7 29	9 55	s7 23	9 54
17	MO.	r4 38	10 18	r4 43	10 17	r4 48	10 17
18	TU.	s7 32	10 38	s7 28	10 38	s7 22	10 40
19	WE.	r4 40	10 57	r4 45	10 59	r4 50	11 2
20	TH.	s7 31	11 17	s7 26	11 20	s7 21	11 24
21	FR.	r4 42	11 40	r4 47	11 44	r4 52	11 49
22	SA.	s7 29	morn	s7 24	morn	s7 19	morn
23	☰	r4 44	0 7	r4 48	0 12	r4 53	0 19
24	MO.	s7 27	0 39	s7 23	0 45	s7 18	0 53
25	TU.	r4 46	1 19	r4 50	1 26	r4 55	1 34
26	WE.	s7 25	2 7	s7 21	2 14	s7 16	2 23
27	TH.	r4 48	3 3	r4 52	3 10	r4 57	3 18
28	FR.	s7 23	rises.	s7 19	rises.	s7 14	rises.
29	SA.	r4 50	8 20	r4 54	8 16	r4 58	8 12
30	☰	s7 21	8 45	s7 17	8 42	s7 12	8 40
31	MO.	r4 52	9 7	r4 56	9 5	r5 0	9 5

MOON'S PHASES. (In Standard Time.)	EAST'N DIVISION.	CENT. DIVISION.
LAST QUARTER...	4d. 11h. 23m. A.	4d. 10h. 23m. A.
NEW MOON.....	11d. 3h. 48m. A.	11d. 2h. 48m. A.
FIRST QUARTER..	19d. 4h. 52m. M.	19d. 3h. 52m. M.
FULL MOON	27d. 3h. 43m. M.	27d. 2h. 43m. M.

		LATITUDE OF BOSTON AND CHICAGO.		LAT. OF NEW YORK AND PHILA.		LAT. OF WASH. CIN. & ST. LOUIS.	
		Local Mean Time.		Local Mean Time.		Local Mean Time.	
Day.	Day of W'k.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.
1	TU.	r4 53	9 27	r4 57	9 27	r5 1	9 27
2	WE.	s7 18	9 48	s7 14	9 49	s7 9	9 51
3	TH.	r4 55	10 10	r4 59	10 12	r5 3	10 16
4	FR.	s7 15	10 36	s7 12	10 40	s7 7	10 45
5	SA.	r4 57	11 8	r5 1	11 13	r5 5	11 20
6	♋	s7 13	11 48	s7 9	11 54	s7 5	morn
7	MO.	r4 59	morn	r5 2	morn	r5 6	0 2
8	TU.	s7 10	0 41	s7 7	0 48	s7 3	0 57
9	WE.	r5 1	1 47	r5 4	1 54	r5 8	2 3
10	TH.	s7 7	3 1	s7 4	3 7	s7 0	3 15
11	FR.	r5 3	sets.	r5 6	sets.	r5 10	sets.
12	SA.	s7 4	7 57	s7 1	7 54	s6 58	7 52
13	♋	r5 5	8 20	r5 8	8 19	r5 12	8 18
14	MO.	s7 2	8 40	s6 59	8 40	s6 55	8 41
15	TU.	r5 7	8 59	r5 10	9 0	r5 14	9 3
16	WE.	s6 59	9 19	s6 56	9 22	s6 53	9 25
17	TH.	r5 10	9 41	r5 12	9 45	r5 15	9 50
18	FR.	s6 56	10 6	s6 53	10 11	s6 50	10 17
19	SA.	r5 12	10 37	r5 14	10 43	r5 17	10 50
20	♋	s6 53	11 14	s6 50	11 21	s6 47	11 29
21	MO.	r5 14	11 59	r5 16	morn	r5 19	morn
22	TU.	s6 50	morn	s6 47	0 6	s6 44	0 15
23	WE.	r5 16	0 52	r5 18	0 59	r5 21	1 8
24	TH.	s6 46	1 53	s6 44	1 59	s6 42	2 7
25	FR.	r5 18	3 1	r5 20	3 6	r5 23	3 13
26	SA.	s6 43	4 11	s6 41	4 15	s6 39	4 20
27	♋	r5 20	rises.	r5 22	rises.	r5 25	rises.
28	MO.	s6 40	7 33	s6 38	7 32	s6 36	7 32
29	TU.	r5 22	7 52	r5 24	7 53	r5 26	7 54
30	WE.	s6 37	8 14	s6 35	8 16	s6 33	8 19
31	TH.	r5 24	8 39	r5 26	8 42	r5 28	8 47

MOON'S PHASES. (In Standard Time.)	EAST'N DIVISION.	CENT. DIVISION.
LAST QUARTER...	3d. 4h. 41m. M.	3d. 3h. 41m. M.
NEW MOON	10d. 2h. 5m. M.	10d. 1h. 5m. M.
FIRST QUARTER ..	17d. 11h. 19m. A.	17d. 10h. 19m. A.
FULL MOON	25d. 3h. 23m. A.	25d. 2h. 23m. A.

		LATITUDE OF BOSTON AND CHICAGO. Local Mean Time.		LAT. OF NEW YORK AND PHILA. Local Mean Time.		LAT. OF WASH. CIN. & ST. LOUIS. Local Mean Time.	
Day.	Day of W'k.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.
1	FR.	r5 25	9 9	r5 27	9 14	r5 29	9 20
2	SA.	s6 31	9 47	s6 30	9 53	s6 28	10 0
3	☰	r5 27	10 34	r5 29	10 41	r5 31	10 49
4	MO.	s6 28	11 33	s6 26	11 40	s6 25	11 49
5	TU.	r5 30	morn	r5 31	morn	r5 33	morn
6	WE.	s6 24	0 43	s6 23	0 50	s6 22	0 58
7	TH.	r5 32	2 0	r5 33	2 6	r5 35	2 12
8	FR.	s6 21	3 16	s6 20	3 21	s6 19	3 26
9	SA.	r5 34	4 32	r5 35	4 35	r5 36	4 39
10	☰	s6 18	sets.	s6 10	sets.	s6 15	sets.
11	MO.	r5 36	7 1	r5 37	7 2	r5 38	7 3
12	TU.	s6 14	7 22	s6 13	7 24	s6 12	7 27
13	WE.	r5 38	7 42	r5 39	7 45	r5 40	7 50
14	TH.	s6 11	8 6	s6 10	8 11	s6 9	8 16
15	FR.	r5 40	8 35	r5 41	8 41	r5 42	8 47
16	SA.	s6 7	9 9	s6 7	9 15	s6 6	9 23
17	☰	r5 42	9 50	r5 43	9 57	r5 43	10 6
18	MO.	s6 3	10 40	s6 3	10 47	s6 3	10 56
19	TU.	r5 44	11 38	r5 45	11 45	r5 45	11 53
20	WE.	s6 0	morn	s6 0	morn	s6 0	morn
21	TH.	r5 47	0 43	r5 47	0 49	r5 47	0 56
22	FR.	s5 56	1 52	s5 56	1 57	s5 57	2 3
23	SA.	r5 49	3 2	r5 49	3 5	r5 49	3 10
24	☰	s5 53	4 12	s5 53	4 14	s5 53	4 17
25	MO.	r5 51	rises.	r5 51	rises.	r5 51	rises.
26	TU.	s5 49	6 19	s5 50	6 21	s5 50	6 23
27	WE.	r5 53	6 43	r5 53	6 46	r5 52	6 50
28	TH.	s5 46	7 10	s5 46	7 14	s5 47	7 20
29	FR.	r5 55	7 45	r5 55	7 51	r5 54	7 58
30	SA.	s5 43	8 30	s5 43	8 37	s5 43	8 45

MOON'S PHASES. (In Standard Time.)	EAST'N DIVISION.	CENT. DIVISION.
LAST QUARTER...	2d. 10h. 19m. M.	2d. 9h. 19m. M.
NEW MOON	9d. 3h. 27m. A.	9d. 2h. 27m. A.
FIRST QUARTER..	17d. 6h. 20m. A.	17d. 5h. 20m. A.
FULL MOON	25d. 2h. 28m. M.	25d. 1h. 28m. M.
LAST QUARTER...	31d. 5h. 42m. A.	31d. 4h. 42m. A.

		LATITUDE OF BOSTON AND CHICAGO.		LAT. OF NEW YORK AND PHILA.		LAT. OF WASH. CIN. & ST. LOUIS.	
		Local Mean Time.		Local Mean Time.		Local Mean Time.	
Day.	Day of W'k.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.
1	♏	r5 58	9 26	r5 57	9 33	r5 56	9 42
2	MO.	s5 39	10 33	s5 40	10 40	s5 40	10 48
3	TU.	r6 0	11 47	r5 59	11 53	r5 58	morn
4	WE.	s5 36	morn	s5 37	morn	s5 37	0 0
5	TH.	r6 2	1 3	r6 1	1 8	r6 0	1 14
6	FR.	s5 32	2 17	s5 33	2 20	s5 34	2 25
7	SA.	r6 4	3 29	r6 3	3 31	r6 2	3 34
8	♏	s5 29	4 37	s5 30	4 38	s5 31	4 39
9	MO.	r6 7	5 44	r6 5	5 43	r6 4	5 43
10	TU.	s5 25	sets.	s5 27	sets.	s5 28	sets.
11	WE.	r6 9	6 9	r6 7	6 13	r6 6	6 18
12	TH.	s5 22	6 35	s5 24	6 40	s5 25	6 46
13	FR.	r6 11	7 6	r6 9	7 12	r6 8	7 20
14	SA.	s5 19	7 44	s5 21	7 51	s5 22	7 59
15	♏	r6 14	8 31	r6 12	8 38	r6 10	8 47
16	MO.	s5 16	9 26	s5 18	9 33	s5 20	9 42
17	TU.	r6 16	10 27	r6 14	10 33	r6 12	10 41
18	WE.	s5 13	11 32	s5 15	11 37	s5 17	11 44
19	TH.	r6 18	morn	r6 16	morn	r6 14	morn
20	FR.	s5 10	0 40	s5 12	0 44	s5 14	0 49
21	SA.	r6 21	1 50	r6 18	1 53	r6 16	1 57
22	♏	s5 7	3 1	s5 9	3 2	s5 11	3 5
23	MO.	r6 23	4 13	r6 20	4 13	r6 18	4 14
24	TU.	s5 4	5 27	s5 6	5 25	s5 9	5 25
25	WE.	r6 25	rises.	r6 23	rises.	r6 20	rises.
26	TH.	s5 1	5 41	s5 3	5 46	s5 6	5 53
27	FR.	r6 28	6 24	r6 25	6 30	r6 22	6 38
28	SA.	s4 58	7 17	s5 1	7 24	s5 4	7 33
29	♏	r6 30	8 22	r6 27	8 29	r6 25	8 38
30	MO.	s4 55	9 36	s4 58	9 42	s5 1	9 50
31	TU.	r6 33	10 53	r6 30	10 58	r6 27	11 4

MOON'S PHASES. (In Standard Time.)	EAST'N DIVISION.	CENT. DIVISION.
NEW MOON.....	8d. 7h. 57m. M.	8d. 6h. 57m. M.
FIRST QUARTER..	16d. 0h. 44m. A.	16d. 11h. 44m. M.
FULL MOON.....	23d. 1h. 8m. A.	23d. 0h. 8m. A.
LAST QUARTER...	30d. 4h. 8m. M.	30d. 3h. 8m. M.

		LATITUDE OF BOSTON AND CHICAGO.		LAT. OF NEW YORK AND PHILA.		LAT. OF WASH. CIN. & ST. LOUIS.	
		Local Mean Time.		Local Mean Time.		Local Mean Time.	
Day.	Day of W'k.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.
1	WE.	r6 34	morn	r6 31	morn	r6 28	morn
2	TH.	s4 52	0 8	s4 55	0 12	s4 58	0 17
3	FR.	r6 36	1 19	r6 33	1 21	r6 30	1 25
4	SA.	s4 49	2 27	s4 52	2 28	s4 56	2 30
5	☰	r6 39	3 34	r6 36	3 34	r6 32	3 34
6	MO.	s4 47	4 40	s4 50	4 38	s4 54	4 38
7	TU.	r6 42	5 46	r6 38	5 43	r6 35	5 41
8	WE.	s4 45	sets.	s4 48	sets.	s4 52	sets.
9	TH.	r6 44	5 6	r6 41	5 12	r6 37	5 19
10	FR.	s4 42	5 43	s4 46	5 50	s4 50	5 58
11	SA.	r6 47	6 26	r6 43	6 33	r6 39	6 42
12	☰	s4 40	7 17	s4 44	7 24	s4 48	7 33
13	MO.	r6 49	8 15	r6 45	8 22	r6 41	8 30
14	TU.	s4 39	9 19	s4 43	9 25	s4 47	9 32
15	WE.	r6 52	10 25	r6 48	10 30	r6 44	10 35
16	TH.	s4 37	11 32	s4 41	11 35	s4 45	11 40
17	FR.	r6 54	morn	r6 50	morn	r6 46	morn
18	SA.	s4 35	0 40	s4 40	0 42	s4 44	0 45
19	☰	r6 57	1 49	r6 53	1 50	r6 48	1 51
20	MO.	s4 34	3 0	s4 38	2 59	s4 43	2 59
21	TU.	r6 59	4 15	r6 55	4 13	r6 50	4 11
22	WE.	s4 33	5 35	s4 37	5 31	s4 42	5 27
23	TH.	r7 2	6 58	r6 57	6 53	r6 52	6 47
24	FR.	s4 32	rises.	s4 36	rises.	s4 41	rises.
25	SA.	r7 4	6 5	r6 59	6 12	r6 54	6 21
26	☰	s4 31	7 20	s4 35	7 27	s4 40	7 35
27	MO.	r7 6	8 38	r7 1	8 44	r6 56	8 50
28	TU.	s4 30	9 55	s4 35	9 59	s4 39	10 4
29	WE.	r7 8	11 10	r7 3	11 13	r6 58	11 17
30	TH.	s4 29	morn	s4 34	morn	s4 39	morn
..	.....	.....	.....	.....	.....	.....	.....

MOON'S PHASES. (In Standard Time.)	EAST'N DIVISION.	CENT. DIVISION.
NEW MOON.....	8d. 2h. 40m. M.	8d. 1h. 40m. M.
FIRST QUARTER..	16d. 5h. 21m. M.	16d. 4h. 21m. M.
FULL MOON	22d. 11h. 36m. A.	22d. 10h. 36m. A.
LAST QUARTER...	29d. 6h. 18m. A.	29d. 5h. 18m. A.

		LATITUDE OF BOSTON AND CHICAGO. Local Mean Time.		LAT. OF NEW YORK AND PHILA. Local Mean Time.		LAT. OF WASH. CIN. & ST. LOUIS. Local Mean Time.	
Day.	Day of W'k.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.	SUN R.&S.	MOON R.&S.
1	FR.	r7 10	0 20	r7 5	0 21	r7 0	0 24
2	SA.	s4 28	1 27	s4 33	1 27	s4 38	1 28
3	☰	r7 12	2 32	r7 7	2 31	r7 2	2 30
4	MO.	s4 28	3 37	s4 33	3 34	s4 38	3 33
5	TU.	r7 14	4 42	r7 9	4 38	r7 4	4 35
6	WE.	s4 28	5 47	s4 33	5 42	s4 38	5 37
7	TH.	r7 16	6 51	r7 11	6 45	r7 6	6 39
8	FR.	s4 28	sets.	s4 33	sets.	s4 38	sets.
9	SA.	r7 18	5 11	r7 13	5 18	r7 8	5 27
10	☰	s4 28	6 7	s4 33	6 14	s4 38	6 22
11	MO.	r7 20	7 9	r7 15	7 15	r7 9	7 22
12	TU.	s4 28	8 15	s4 33	8 20	s4 39	8 26
13	WE.	r7 21	9 21	r7 16	9 25	r7 11	9 30
14	TH.	s4 29	10 27	s4 34	10 29	s4 39	10 33
15	FR.	r7 23	11 33	r7 18	11 34	r7 12	11 36
16	SA.	s4 29	morn	s4 34	morn	s4 40	morn
17	☰	r7 24	0 40	r7 19	0 40	r7 14	0 41
18	MO.	s4 30	1 50	s4 35	1 48	s4 41	1 48
19	TU.	r7 26	3 5	r7 20	3 2	r7 15	3 0
20	WE.	s4 31	4 25	s4 36	4 20	s4 42	4 16
21	TH.	r7 26	5 47	r7 21	5 41	r7 15	5 35
22	FR.	s4 32	7 8	s4 37	7 1	s4 43	6 54
23	SA.	r7 27	rises.	r7 22	rises.	r7 16	rises.
24	☰	s4 33	6 11	s4 38	6 17	s4 44	6 24
25	MO.	r7 28	7 32	r7 23	7 37	r7 17	7 43
26	TU.	s4 34	8 52	s4 40	8 55	s4 45	9 0
27	WE.	r7 29	10 6	r7 23	10 8	r7 18	10 11
28	TH.	s4 36	11 16	s4 41	11 16	s4 46	11 18
29	FR.	r7 29	morn	r7 24	morn	r7 19	morn
30	SA.	s4 37	0 24	s4 42	0 23	s4 48	0 23
31	☰	r7 30	1 30	r7 24	1 28	r7 19	1 26

Ther. SUN. JAN. 8, 1893 Wea.

New Bedford

bet- Capt- Whitesides
would beat him
Cleaning in new
Cleared $5.00

vs that the Beluga
would beat Narwah

Ther. WED. JAN. 18, 1893 Wea.

Ther. SUN. JAN. 22, 1893 Wea.

Ther. MON. JAN. 30, 1893 Wea.

Ther. FRI. FEB. 3, 1893 Wea.

Ther. SAT. FEB. 4, 1893 Wea.

Ther. SUN. FEB. 5, 1893 Wea.

Ther. TUES. FEB. 7, 1893 Wea.

Ther. THURS. FEB. 9, 1893 Wea.

Ther. SAT. FEB. 11, 1893 Wea.

Ther. MON. FEB. 13, 1893 Wea.

Ther. WED. FEB. 15, 1893 Wea.

Ther. FRI. FEB. 17, 1893 Wea.

Ther. MON. FEB. 20, 1893 Wea.

Ther. TUES. FEB. 21, 1893 Wea.

Ther. THURS. FEB. 23, 1893 Wea.

Ther. SAT. FEB. 25, 1893 Wea.

Amount brought forward from old book.

Round trip ticket from San Francisco to New Bedford including Sleeper + meals $169.10

Fare to Boston 1.35

Boston to Chicago 22.00

Sleeper 5.00

Ther. FRI. MAR. 3, 1893 Wea.

Ther. SUN. MAR. 5, 1893 Wea.

Ther. TUES. MAR. 7, 1893 Wea.

Went ashore in my
Deposition for Myself
and the Swift.
Got on board my
Ship (is) Stm Whaler
Beluga at 12 M Dismissed
the Engineers to go ahead
but there was something
the matter with the
lower pressure Cylinder
took half an hour to
fix it at 4-10 left
point Bonita at 7 PM
South Farallones bear
Mitto 8 miles shall go
under slow bell to
night strong breeze
from West ship
is doing well and
making good time

To day has been a fresh breeze from South some rain at 6-30 A M stopped steaming and made sail have been heading about W.S.W all day some rain at 8 am set stormsail sail to lower topsails and foresail stay sails &c

Lat 37. 13 N
Long 123. 30 W

Ther. SAT. MAR. 11, 1893 Wea.

Wind West

Forenoon moderate
fair heavy squalls had
one very heavy squall
big hail & lamed ship on
the wind heading about
8 P.M. at 4 P.M. Wind
moderated heavy sea
at 5 P.M. sent her along
under the jib & left
finds the ropes very
poor almost im-
-possible to handle
a sail on account
of running rigging
parting have rove new
topsail down hauls
& lower main topsail
braces at sun set
heading S.W.by.S

36 - 51 N.
124 - 35 W

To day has been a
calm all day have seen
see day Cirrus N.E. have
a strong sense that I
think is shapening
can't go into the rigging
but can go up three
rattlings by stead-
able bobyed man I
think he is shapening
at sun set - light-
airs from S.W.
shifting under sleeve

Lat: 33° 3' 9 N,
Long. 126° 17 W,

The day has been a very strong breeze from South & S.E. have been steering course W by N. & W.N.W. at 6 P.M. Wind inclined to have hr & P.M. Pleasing rain this P.M.

Lat: 36.11.W.
Long. W.17.

To day. Gale from
Mast-carrying foresail-
sail heading S.W by the
Wind put up weather
cloths crept in via Torres

Lat; 36. 26 N,
Long 129.. 20 W

To day has been a drizzl from S.W. & W.S.W. Ship on opersite tacks fine pleasent Weather rove off considerabl new rigging find all the running rigging any poor.

Lat 33.07 N.
130.00 W.

J. C. Baker.

This day has been a fine pleasant day wind from W.S.W. Ship by the wind heading N.W. ~~[illegible]~~ ~~[illegible]~~ N.W. by W. Have Coiled a new set of Whale lines Cleaned Ivy Pots and done various other Jobs,

Lat: 35°. 16 N
Long. 130. 10 W

Fine pleasant
Weather Ship by the wind
heading about W.by.N.
Wind about S.W. served
out Clothing to Crew
repaired force Pump
Ship under sail

Lat 36° 13 N.
Long 131° 38 W.

Morning rain
gentle 10 A.M. Wind
from South at 11-30
hauled to N.E. Shaped
Course S.W. & W. Ship under
all sail some men
repairing halyards &c
blacksmithing &c

37 0 3 W.
183 " 20 W.

Ther. SUN. MAR. 19, 1893 Wea.

Commences with a breeze from South cloudy weather wind increasing and rain down in hail as the wind increased at 3, P.M. under lower topsails at 6 P.M. More ship heading South,

W. Owen

Forenoon Gale gradually
moderating made
sail as wind moder-
ated at Sun set Ship
heading S.W.by.W. carry
Whole Topsails
indications of better
Weather

Lat 36.46 N.
Long 135.25 W.

Morning breeze from N.W. hauling gradually to S.S.W. at nine A.M. ordered steam fires were lit at 9-03. got signal (single bell) at 12-40 that is all ready to go ahead signaled back go ahead full speed (2 x 1 one bell & the single, Employed in fitting cutting stage blacksmith rattling fore topmast rigging &c. at 7 P.M. Course West - Ship under steam and fore and aft sails. Wind about S.W. with rain. Weather looks bad. Bar. at about 30.° about steady.

J. G. Baker, [illegible]

Lat 1 33 " 36 N.
Long 36 " 33 W.

J. G. Baker, [illegible]
J. G. Baker.

To day has been a good breeze from W.S.W foggy weather ship under sail on opposite tacks carrying all sail scraped topmast & gallant mast. over hauled boat tackel blocks rove some new gauls rigged cattings & lazy and ~~other~~ other job. H.C. Wind dead ahead. Last night at 7-45 P.M wind veered on and hauled ship heading west broke off to W.N.W. made sail stop steaming. had steamed 7 hours

Lat - by Q.R. 33.5 N.
Long " Obs. " 137 " 36 m.

To day has been a
fresh breeze from about
S.W. & W.S.W. Ship under sail
heading from N.W. by W. to
W.N.W. carrying all sail
most of the time P.M.
both Main Royal &
Fore Gallants sail Employ
blacksmithing overhauling
blocks rigging &c. thick
fog most of the day
man on bow sounding
fog Horn at intervals
of one minute.

Lat by D.R. 37.30 N
Long. " " " 139.06 W

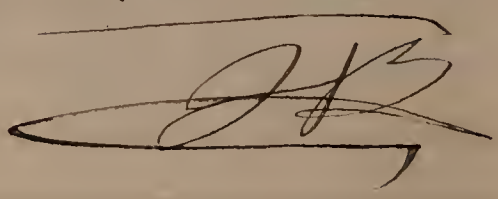
To day has been a moderate breeze from S.S.W + W.S.W Ship on Port tack under all sail heading W - W.N.W + N.W at 4-30 P.M tacked & shifted to South at 6-30 tacked again to N.W. from that to day at 12 M heavy rain closely all of forenoon employed in doing various jobs blacksmithing &c.

W Bowl

To day has been light
breze from west-ordered
Steam at nine A.M.
at 1-50 P.M. signed
from Engine room
already. gave signal
full speed ahead (8)
one bell & single have
been steering from S.W.
to N.W. Wind bothering
make fine & off sails
drain fine pleasant
Weather

Lat. 38.10 N.
Long. 140.5-8 W.

am troubled with adverse
Winds have 4-8 knots



Begins with fine weather very light air from N.W. ship under steam & fore & aft sails at nine A.M. breezed up from West stoped steaming & made sail ship heading S.W. at 12 M Calm steamed until 3 P.M. breezed up from North stoped steam made sail ship heading W by S carrying all sail some rain to-day no sun have been heading from W.S.W to W.

No Obs.

breeze from ~~Westward~~
N.W. Ship under sail
heading from W.S.W. to West
some equally carrying all
prudent sail

37. 30 N.
124. 3-3 W.

64

"To day has been a breeze from W.N.W & W come equally carrying all sail ship heading from W by S & S.S.W Drailers, up run and doing various other Jobs.

37. 03 N,
147. 30 W,

To day have been a moderate gale from W.N.W. hauling to N.N.W. ship under lower topsails foresail jib spanker & main T.G. flying sail at 8 P M set upper topsails have been heading about W.S.W at 2 P M came up to West that being our Course have steered West good hard pull forenoon frequent rain squalls afternoon squally but no rain

35.38 N
149.00 W

To day begins with a moderate breeze from North hauling to N.W. & and dying away to a light Air. got steam and sent her ahead under the jingle at 1120 P.M. fine pleasant Weather Course N.by.W. furled all sails at sun set. About Calm. employed in doing various jobs of work in the rigging blacksmithing &c.

36. 02 N.
151. 00 W.

To day has been Calm
until 4 PM breeze from
South been under Steam
27 hours & 10 minutes
made 189 miles & lopped
steaming at 4-10 PM
made sail. Course NNW
think Compass is about
4° out - to South have not
made my Course good
by that amount - smooth
sea and under steam
put up Crows nest
various other Jobs going
on. &c.

37.00 N,
133.40 W.

End of March 1893

To day has been light
breeze from West S.W. pleasant
weather Ship on the mend
heading to N.W. plugged up
steam pipe hole for Engineer
so he could fix his valve
he saying it was leaking
and filling his boiler &
cylinders blowed down
boiler last night. Cleaned
it out refilled it again
this day. at 6 PM moderate
breeze with rain

37.36 N
134.28 W

So day commences
With Calm at nine A M
Come light breeze from
S.S.W. Course W by N, at 10-23
started & leaned & leaned
untill 2.33 Came fresh
breeze from S.W. Some
rain at 3 P M Wind
began to haul at 6 P.M.
Ship under Sail heading
N.by.W. think I shall lock
Ship to S.W. Saw a
4 Masted Bkn
three aft masts fore &
aft rigged foremast
square rigged & leaning
aboul N.by.E.

38.39 N
136.00 W.

Commences with a heavy
breeze from North Course
W by N. gradually decreasing
to a moderate breeze slackens
Steam at 2.25 P.M. at
7 P.M. Wind East very
light. Course W by N ½ N.

Lat: by D R: 39. 09. N,
No Long,

put 10 tons Coal
on board

So day has been a breeze from S.E. forenoon light at nine A.M. breezed up & hoped & learn at 9.25. have steamed 19 hours dist. by log 142 miles, Total time steaming since Mar 30 54.48,

At Sun set fine breeze from about S.E. Coming all sail

40.15 N.
160.28 W.

We have been a moderate breeze from South
clear most of the time
come thick in the morning
ship carrying all sail
Course W.W.by.N

41. 47 N.
162. 40 W.

Sun set Wind S.S.E.
Drizzling rain

To day has been light airs & Calms thick fog all a.m. started cleaning at 7-47 P.M. Clear weather most of the time at 6-25 P.M. made sail slaped cleaning ship heading Course N.W. about on the wind, ordered banked fires,

Lat by D.R. 43. 10 N.
Long by Obs. 164 22 W.

To day have been a very
strong breeze from about
west - Ship on Northern tack
took in square sails and
tried steam but did
not make out anything
steamed three hours
at turn set more
moderate - Ship wind
lower topsail staysails
& foresail & reefed
spanker.

43.0 N.
165 " 13 m.

Signs of better weather

Commences with a breeze from S.W. hauling to South thick & raining shortly after Rain ceases wind increased both in Sloop & boat.

D. R. 46.38 N.
Obs. 165.34 N.

Had been a moderate
Gale from Westward ship
Carrying prudent sail head
to N.W. at sun set broke
off to N by W morning
thick fog cleared off at
nine A.M. sun set —
signs of better weather

48, 13 N.
16 7 " 11 W.

To day has been a fresh breze from West - Ship heading NNWbyN. & NNW made sail as wind moderated at 3-45 started clean cleared up and furled square sail Log. 73 - Cours NWbyN

H. E. 44 N.
L. 24 N.

Come through Fog
Islands Eastward four
mountains gale from
westward blowed away
lower foretopsail got hi
by the land about dark
Ship heading to North
lower topsails & Steam

Morning gale from
West - heavy snow squalls
Ship by the wind heading
to north land on lee
quarter unmanageable

Lat - 3-3 " 3-3-N
Long 168 " 00 W.

To day has been
breeze from N N E & N.N.E
ship on opposite tack
at 4-30 P.M. got steam
furled square sails steering
Courses W.4.S

Lat - 3-4.. 48 N
Long 168.. 00 W

Commences with a fresh breeze from S.E. gradually increasing to a gale toward light — sails at 10 AM upper topsails at 12 M. Wind hauled to E. by S. Course N.W. by N. to W. by N. afternoon much snow. Fresh gale

Lat. 38.. 39 N
Long. 170.. 43 W

Ther. 34 SUN. APRIL 16, 1893 Wea. Snow

To day Commences with a breeze from E.S.E with Snow hauling gradualy to S.E sun break out at intervals foggy harrison afternoon wind more moderate plenty snow at 4-30 P.M hauled to Westward and blowing on fresh hove too under lower main Topsail and storm staysails heading about North,

Bar. 29.30

Lat 37.20 N

Long 174.48 W.

In. pocket $38.05

To day Commences with a breeze from W.S.W. Ship heading W.W.by W. Carrying all sail Wind died away got a learn at 9 am heavy swell from West — PM Wind hauled to north at 6 PM started a learn a strong breeze from North Ship under prudent sail heading W.N.W

at 12 M.

58.36 N.
173.42 E

put out Starboard & Waist Boats —

"To day Commences with a fresh & strong breeze from North hauling to N.N.E ship by the Wind heading to N.N.W at 12 M furled square sails & steam and headed N.W under steam & fore & aft sails at 7 P.M. Weather clear Wind moderating

39.06 N.
179.30 W.

This day has been a fine pleasant day fine breeze from N.E and varibl at 12 M came to the Jul got up Cutting gear put on Rudder Gudes and have done various other Jobs at dark Ship heading along the Jc. S.E.

At 12 M
Lat. 6.0. 5-2 N.
Long 178.00 E

#

light - baffeling winds
at 10 A M took the Ice
Ice very light - have
Steamed all day at
8-30 P.M (Clark) slipped
in a big hole of clear
water Calm

Saw one whale

60.5-8 N
178.21 E

Ther. SAT. APRIL 22, 1893 Wea.

breeze from North
Cleared to north through
Considerable Ice. saw five
ships spoke Alice Knowles
& California land is
Light to North Cape Navarino

Lat. 39 N

IIIIIIII

Saw a Bow Head

Moderate breeze from North Ice very open saw Ship under sail at one P.M got steamed and steamed to N.E. until 4 P.M came up to head of the hole hauled Head Yards aback at 5 P.M saw a Bow Head lowered three boats got just near enough to him to be to far off got one Bomb into him but never saw the whole again boats returned on board at 7 P.M saw 8 sailing Ships

Lt. 3d N
Lg. 20 W

land in sight
N.N.W

Cape Warrenne

Saw Bugs Heads

Saw Bow heads

To day has been a
gale from North making
6 ships in sight - one ship
lowered five boats. all of them
got steam have worked
to windward under fore
& aft sails & steam
saw one steamer and
three sails to west;
Maneuvre N by W 50 miles

Lat 6° 11" 26 N,

Commences with a gale
from N.E clear weather
ship in close ice drifted
across one large hole
saw 10 sail to South &
West ~ one Steamer
afternoon heavy gale
thick snow storm
ship fast in ice head to
the West. at 7 P M
Bar. 29.90°

Lat - 61.29 N.
Long 179.07 E.

Gale from NE
blowing heavy all night
moderated some
Spoke Britain & Mr. Baylor

Ele. 18 N
178.102.

To day has been a
Clear pleasant-day and a
gale from N.E have
blowed about-all day
got-well up to the
Kennedy Spake a Vessel
Belvedere Capt-came
on board a little while

61.. 38 N.
177.. 22 E.

Fresh breeze from NE Clear Weather have been beating to the Windward all day one steamer and three sailing ships in sight at 7 PM Wind moderate land in sight

61.4 43 N
176.4 20 E

do Ends April 1893

breeze from North
have steered to Eastward
in Company with Belvedere
saw 7 sailing ships spoke
Wm Boglis at 8 P.M.
Cape Mancrine NNE. in
sight - stuck in heavy Ice
at 7 P.M.

Lat. 27 N
Long. 11 W.

To day has been a strong breeze from N.E. some snow & some clear spots Belvedere concluded to rail-road another day took the ice from sluice head and sail. Belvedere bears E by S½S. 5 miles

61, 41 N.
177 " 18 E.

fresh breeze from
N.E.by.E Went to E.S.E all
forenoon found Jce
making to for south
lapped to spak Belvedere
took the Jce at 7 P.M
got in a little way
and got stuck so
gave it up for the night

61.. 15 N.
177.. 26 E

Ther. THURS. MAY 4, 1893 Wea.

Spoke 78 Belvedere
& Narrach.
Lane Bro Heads

61. 21
177. 37

Fine weather steamed
10 miles to N.W.E
Belvedere & Darvach
in Company made
fast to the Jee at 10am
lowered for Bowhead

Ther. SAT. MAY 6, 1893 Wea.

Fine weather close
for three steamers
in sight

Saw Whales

61. 83 N.
178. 14 E

Fine weather lowered for Bow Heads but so much young Ice could do nothing Ice closed up Carraled the Boats was obliged to get steam and go and pick them up.

61. 31 N.
178. 21 E

To day has been a breeze from Westward pleasant weather Ship Cringry around in close Ice saw a number of Bow Heads have had men out on the Ice have launched two boats Ice closed up had to haul the boats over the Ice to get on board Belvedere & Navarch both Whaling saw one other steamer to S.W.

61.21 N,
178.53. E,

Took a Bowhead
light breeze from
W.S.W same thick saw
number of Whales lowered
3 boats S.B. Boat struck
killed Whales instantly got
him out in at 2.30 P.M
cleared away head sent
watch below at 6 P.M
saw Belvedere & Warwick
with boats down Jce
quite close, saw one
other steamer W.S.W
at 7 P.M Belvedere North
Warwick N.E.

N. Ubbo

To day has been a breeze from N.W. to light at six P.M. wind hauled to E.S.E. fresh breeze have steamed to north about 5 miles & steamers in sight. Cape Navarin N by W ½ W. in sight. saw Belveder & Norwoch with boats down have seen one whale to day at a distance ships heard to north employed in boiling no sale on.

64, 43 N.
178, 53 E

light Wind from
S.E. pleasant Weather
Ship lying around in
loose Ice saw no Whales
to day three Ships in sight
Cape Roxerine North 18
miles finished bolting
at 8 P.M.

61. 54 N
178. 51 E

#

fine pleasent weather
Ship had cleared 4 P.M
about 3 hours came through
some Ice stoped at one
P.M at 4 P.M lowered
for a whale saw him
only one rising saw
Warwarch & Belvedere
each take a whale,

6/" 3-3-N,
Employed in stowing
down, O.S,

Fine Weather bright
from E.N.E. light from
S.E. Ship lying around
in bower fast at 2 PM
made sail heading to
S.E. 3 steamers in sight

61, 3-9 M.
Moderate N.N.E.

Fine pleasent weather
Ship lying around in
loose Ice lowered twice for
Bow Heads but never saw
them again saw Belvedere
& Karluk take two Whales each
Narvarch struck and lost
a Whale. Squerine bears
N.E and in sight.
No Obs.
hope to get a Whale to morrow

#

This day commences
with fine weather
Ship in class J.C.,
gradually coming
in thick eventualy turned
in to a thick snow storm
fresh breeze from North
Ship heading to W.S.W
at 2 P.M. wore Ship to
N.E. saw three Bow. Heads
but Ice so bad could not
go out on Ice or lower
the Boats. saw the three
steamers to West &
S.W.

Geo. A Bow

To day has been a strong breeze from North ship working to North + N.E found all clear water next to the land at 7 P.M hove up for the night and waited for the others to come up Mancorine bears N.E.by E at 7.00 P.M wind died away to most calm ship been under steam all day.

61.34 N,
177.10 W,

light breeze from North
& N.E Calm some part
of the day have steamed
up to 80 miles to East of
Shedrin and back again
to Nameime Ice so
close cant get into it.
Karluk in company
with me saw but
other Steamers in the Ice
Lat; 62.33 N;

roam around
the Lake most and
with at 11 a m hauled
into the Eastward Dam
two steamers and
four sailing vessels
Sophie Marbach - Kanhur
has been in company
with one all day

Warnock & Kadish in
company left Juneau
all for Dawson at 1 PM
Jim Sluiced off, steamed
ahead & Eastward down
S. said Clark Alaska
& James Allen
Warnock & Kadish,

61,, 3 7 N,

Ther. SAT. MAY 20, 1893 Wea.

Fine weather and
has been motoring
through the Lake
District Keswick
in company Rev.
& Darling whole

61° 20 N
179° 36 E

To day has been a gale from S and S by E with Jel. Cap. Schooner & being come on board to Dinner at 1 P.M. I've slacked up a little steamed about 2 miles and shuts again! the other two steamers close to.

Mr Ebbett

To day has been light
breeze from south
pleasant weather
Ship stuck fast in Ice
Kaluk & Darnell in
Company stuck
at Cape Wilson and
other Sea Ice. 4 P.M.

61 49 N.
[illegible]

Gale from N.E.
Navarch N. Kanbu close
to gale from N.E. Saw
one steamer to East-
ward one to W.N.W. and
two sailing ships to West
Ship struck Jibs in the
Jib head to Leeward
at 6. PM shifted over
Sterns.

62 on N.
178 3 to W.

Steamed to windward
We spoke "Shawsheen"
very smart Attack of
Del 5-miles in sight.

Clear weather cleared
to N.E all forenoon at
11 A.M. Coming between
a large floe of Ice and a
bay Lake of Ice a piece
of Ice shot out from
under the bay & struck
the Propeller and broke off
one blade. The Engine was
stopped at the time.

6 A.M. 10 N.
11 8. 18 N.

Sarnach & Karlsen
4 hours

breeze from N.E. & N.
came about 2 miles
during large flock of Bird
came in 4 o'clock
close to the Thresher
and took on board
the Copper Dams
ready to be for putting
on 80 more blocks for
my Professor

6 R. 14 N
178.17 N.

Nanaimo & Kalatz
SE.

Gale from North
moved about 1½ miles
to day and tied up again
Thrasher ahead close to
Navarch & Kaluk P.E.G.E
long way off. Ice very
close as two ships are lying
in a small hole of water
at 7 P.M. Bar. 28.04"

62.16 N.

Strong breeze from N.E. clear pleasant weather
ship tied up to the Jee
Thrusher close to Capt.
Macomber came on
board. Navarch & Karluk
left S.E.

62.. 09. N
178.. 48 W.

Light Airs and Calms
Ship tied up to the Ice
moved out in to the Hole
with the Thrasher Navarch
& Karluk Went out of
sight to S.E another
Steamer came in sight
to W.N Call it Belucha,

62.. 0 4 N.
178.. 49 W.

at 7 PM sounded
got 65 fathoms

have steamed to Eastward
about all day came through
Considerable Ice. by Thrasher in
Company. at 3 P.M came
in thick fog at 4-30 tied
up to the Ice. Capt Macomber
came on board. light Wind
from South.

62.. 03 N
177.. 49 W.

do Ends May 1893

Forenoon clear and pleasent - got steam at 7-30 and have made about NE Course course about 40 miles at 4 P.M. Came in thick fog both ships in a big Hole of clear water at Eight P.M. Stopped shal wait until it clears up so can see where to go.

No Lead:
Log at Med. 177.00 M.

Ther. SAT. JUNE 3, 1893 Wea.

got to Indian Rain

Anchored.

been cleaning all day

Anchored at
Jordan Point at 6 Am
got under way and
steamed to North at 7 PM
Anchored at North Head.
St. Lawrence Bay,
Cape Breton,

Anchored at
Whalon at 2 P M
got underway at 2 A M
this Morning found
a bad leak where the
shaft goes through the
Stern tube been to
work all day fixing it
this P M both Steam
Pumps would just
keep her free.

Took up the Anchor
tied up to ground
Lee Narvach, J. H.
Sherman and Mr. Hame
here. thick fog about-
all day.

Finished Working
on the Lake about 7-30
A.M. have got it all
right now,

Calm, fluted around
6 South of Cape Cod

Gale from North
broke adrift from Ice
kept off made fast to
the Ice off North Head
St. Lawrence Bay at
12 M. at 4 PM
Ice shifting got steam
fleet to south about
3 miles Narrach
in Company 2 other
Sails to ~~South~~
Found Ice makes
about 8 miles from
the land.
Bar. 29.06

one boat gone Jammy

Went over to
Dromoland
Built

Returned to Cape
Cod;
4 steamers
here
Saw Sam
at Bass Head &
rescued Capt. Beal

Tied up to 2nd
off North head

[illegible]
[illegible]
[illegible]

Photo Alice Knowles
Albatross & Reindeer

Came up to Lake
Cecil - smooth lake &
the Sea,

Ther. SAT. JUNE 17, 1893 Wea.

Ther. MON. JUNE 19, 1893 Wea.

Arrived at Port-
Clarence

in Port Clarence
Mind Well

put ship down by
the head ready to put
on Coffer dams

Got Coffee Dawn
under put on new
blade to propeller finished
at midnight.
J. D. Peters arrived

Finished plowing
back piece Coffer Adams
on board Thrasher

Mentone to
Watering place
Commenced to Water

Finished Malting at 8 a.m. 600 bbls
arrived to Land Spil.
at 11 a.m.

rain West-along side Coal Ship comes to take Coal.

Calm thick and
rainy finished Coaling
Jennie Arrived
Blowed down
boiler

took on board
recruits from
Jennie

End of June '93

bundled the bone
helping Peters
get Ballast

Weight of Whale bone
shipped by J D Pettis

120	123
143	133
103	123
110	110
83	123
103	133
93	120
113	113
123	113
1003	1103

2110 lbs

Wind S.E rain

Two boat Crew
helping ballast
J. D. Pebis

been helping ballast-
Peters took my
Anchor at 6-30 PM
bound to the Arch &c

Light airs from S.E. Ship under steam steering south pleasant weather

fresh breeze from S.E
thick most of the day
last night at 8-30 P.M
came to ice thick fog lasted
until this morning
kept away to N along the
ice spoke Dundee telling me
he was 20 miles N.W of
Point Hope I think from
South of Capt. Thompson
saw 6 sealing ships.
saw the land to North

forenoon breeze from South some thick rain & hail spoke "Reinder" at Nine am took in square sails got steam worked to East under steam & fore & aft sails at 12 m lit up saw land run to East until 2 P.M Cape Thompson bore NW I called it 20 miles come back to West along the Ice until I think Cape Thompson bears north come in thick fog spoke James Allen went on board a little While anchored at 4 PM 22 fathoms water at 7 P M still thick

Lat: 67.. 5-4 N.

Ship under sail got
under way at 7 a m
run along the Ice a
little way spoke Orca saw
4 seal spoke Thrasher at
2 P m anchored off
Cape Thompson the Cape
bearing N 2½ W. 14 fathoms
water anchored first out-
side of the Ice at 7 P m
Calm, about all ships
are anchored, thick fog all
night last night;

Ship at Anchor off Cape
Thompson at 9 A.M. got under
way floated off shore anchored
again at 1 P.M. got under
way again came up to South
of Point Hope can get within
about 4 miles of the Point
Orca went in at 7 P.M.
looks as though he had made
lost to ground Jce. 6 Sailing
Ships and 4 Steamers
Waiting for the Jce to go off
Forenoon thick afternoon
strong breze from N.W.
Clear most of the time

thick and rainy at
8-45 got steam and
steamed in through the
anchored at Point Pope
at 12 M 6 steamers
near Albany from
North,

Gale from North-West
at Anchor at Point-Hope.
6 Cleared here another
Canoeing. at 8 A M had
to Cut in Shore away
from the Ice.

Gale from North ship
at anchor at Point-Hope
Jennie & Reindeer arrived.
Clear weather.

Gale from North
Anchored at Point Hope
A Barker arrived,

Gale from North
at 4 PM moderated
to light breeze got under
way and steamed to North

Fresh breeze from NE
Ship under steam &
fore & aft sails passed
Point Lazat 4 P.M.
Berne Isl. at 7 PM
Rounded 11 fathoms
steering Cours NbyW½W,
steam & fore & aft sails

Steaming to North,
at 12 M. off Waimea
Inlet; at 9 P.M. off Point
Franklin.

at 3 P.M. tied up to the ground Jce off Cape Smyth & Steamers here.

Fine pleasant Weather

A strong breeze from
N.E. afternoon some
rain struck fast to
ground tackle.
remodled main
& foremast stay sail.

fresh breeze from
North came thick ship
lied up to ground fee.

Moderate breeze from N.E. thick most of the day. Shift fast in the P.M.

166.85
85.00
131.85
23.50
155.35

breeze from North
let go from the Ice at
6 A.M. Worked up to head
of the Hole made fast to
the Ice again Steamers
all came up Point-Barrow
bears S by W in sight
7 fathoms water no
clear water to North & East
Afternoon thick fog.

Ice Dog to day

$1.65 gold
$1.85 Sterling.

Ship Gadt to Jae
breeze from NE afternoon
rain,

fine breeze from NE
veered to North East about 8
miles made fast to the ice
again Orca Thrasher &
Mary D. Hume are here &

Lat: 71° 30 N

A strong breeze from
N.E which fog all forenoon
some fog coming
along cleared off at 2 P.M
~~fog~~ fleeted down to South
about 3 miles got under
the Lee more, anchored
here

breeze from N.E. flattened
to N.N.E. about 10 miles
made fast to the Jee ayoun

Strong breeze from
N.E. had to float a little
way and tied up again
for most of the day;
Thrasher to windward
Orca & Hume to Leeward

At 2 a m was obliged to fleet to S in about 2 miles tied up again strong breeze from N.E & thick At 3 p m let go from the Ice started to get out of the Ice Orca is shut in coal get out he blowed two whistle and set flag to Nigger Peak so we came back and made fast to Ice again

Wind NE thick mist
of the day Ice has closed
in on us we are in
a very small Hole just
room to sleep
Thrasher — M. D. Hume
+ Belayo, Arca NE 2
miles

Wind N.E. thick most of the day J.C. holding imprisoned yet.

N.E. Wind fleeted in to a big tide made fast to Grey Jer. & Steamers Bight 6 miles to S.E. & W. Area 2 miles N.N.E. Thrashed M. Downs and my self home

So Ends July 1893.

Mid N. 6. Ship still
fast to the Ice. The Ice does
not seem to open. Capt
Sherman - Macomber
& Lezanette came on board
had a quiet game of draw
I said in sight to S.W

light breeze N.N.E
still fast to the ice we are
in a hole of clear water but
closed in by ice 11 still in
sight to leeward (L-L W)

Ther. SAT. AUG. 5, 1893 Wea.

Calm still pool —
to the sea
no signs of
opening yet

fresh breeze NE
no change in the
ice

Still imprisoned by
Jee, Wren got out and
came into the panel with
us.

Ice loosened up had to float — a little way. Wind still from N.E.

Ice slacked and strong current setting S.W. let go from the Ice at 2-30 P.M. came down to Point Barrow Orca Thrasher M. D. Hearne and Beluga Anchored at 6-30 P.M. 26 sail Anchored here an Officer of Bear made one a visit; strong breze from N.E all day

Ther. THURS. AUG. 10, 1893 Wea.

fresh breeze from N E
Anchored at Point Barrow

fresh breeze from NE
fogs disappeared at Point
Barrow.

Morning clear breeze
from N.E took my
anchor and went out-
side of ground Ice and
steamed to North East
along the Ice came in
thick Joy made fast to
the Ice in company
with Orca & Belvedere.
Ice kept breaking off
was obliged to let go
from Ice altogether
came back to the Point
and anchored at 6-30
P.M

Ther. SUN. AUG. 13. 1893 Wea.

Gale from N.E anchored
at Point Barrow.

Gale from N.E. Dosine
for Ship at Anchor.

Gale from NE
Ship at anchor

breeze from NE
ship at anchor

read 16 40/7

got underway at 5-30 steamed to N E made fast to the Ice at 11 Am Ice broken open. 7 steamers Karluk - Jeanette & Mr. D. Hanna have gone in shore, at 6-30 P M let go from the Ice and steamed in shore Orca with me going to see if we can get around the Ice to the Eastward.-
5 at 5 A M shift off Cape Halkett - lay to all forenoon afternoon went through the Ice had to go well in shore in 1/4 less 4 fathoms come out into clear water at 6 P M very little or no Ice in sight to Eastward

breeze from N.E. morning
thick fog until 8 a.m.
Cleared away quite clear
at 2 a.m. Ship off Return
Reef. Ship under steam
at one P.M. the joint in
the main pipe blew out
Caused a delay of 3 hours
got steam again but gave
off and made sail so the
Engineers can have
ample time to make
a through job of it
stood to Eastward - came
to Jee at 6 P.M. tacked
ship to North, thick fog all
P.M.

thick dense fog all day
Ship under steam saw land
called it - Marriage Point -
came to plenty of Ice at -
11 A.M. tied up to the Ice Three
Steamers here. Orca, ~~Narwhal~~
Navarch & Jeanette, thick
fog.

Capt - Whitaker of
the Navarch has fell and
hurt himself quite bad.

Gale from NE

let go from Jce at
11 a.m. steamed S-East
as far as martin Point
found that the Jce made
on to the land came back
about 10 miles found a
hole through. came out
through the ground Jce
in to the clear water
fond breeze from NE
and heavy sea running
South in Jare set aft sails
and steamed head to
wind and sea, same
thick Orca in company
Cours, N, E by, N, ½ N

Ship under steam head
to wind & sea.
at 9 P.M. spoke S.
Newport - Capt. Porter
he being one of the four
steamers that wintered
at Herschel Island
he has 20 Whales
Narwhal 40 "
Balena 34 "
Grampus 29 "

Ther. TUES. AUG. 22, 1893 Wea.

Saw Whales

Fine weather light baffeling winds lowered twice for Whales got Six Saw Six Steamers take one Whale each,

Took a Bow Head 2

Light airs & Calms
Ship drifting around
got steam at 3 P m
steamed to N.E 2 hours
saw a number of Whales
at 6. P.m lowered Waist
boat struck got Whale cut
in at 11 P.m 14 fathoms
Water saw Karluk take
a Whale

Took a Bow Head

3

morning fresh breze from N.N.W saw 8 sperm saw two take a Whale lowered, Waist-boat struck got through cutting at 10.30 A.M 5 fathoms water land in sight bearing S.E by Compass.

Afternoon thick Skies under sail and one bell steam on opposite tacks 8½ fathoms at 4.30 P.M at 7 P.M fathoms

Took a Bow Head
4

at three A.M Anchored in 7½ fathoms - got under way again at 6.30 6 a.m in sight all Whaling Crew got two Whales Karluk 2 Jenette 1 Belvedere 1 and I lowered my Boat at on P.M at 4 waist boat struck cut in and set the watch at 8 P.M and shal start the Works as soon as get bone stowed away.

Took a Bow Head 5 –

Light airs & Calms
afternoon bruge from S. W
saw plenty Whales
got one Balena, got
3. Sanctual 2 Orca 2
Belvedere 1.

thick fog all A M
clear P M saw plenty
of whales but no wind
Boats down all day
got nip

Saw three Flemer

Took a Bow Head
Saw number of Ships
Lake Whales Bealena
Got 3.

Ther. THURS. AUG. 31, 1893 Wea.

Took two Boat Heads

saw several ships
take a Whale same
took two

Gale from North
saw Whales

Ther. SAT. SEPT. 2, 1893 Wea.

Took a Bow Head Sy
Forenoon mend
fresh 12 M moderate
Saw Whales got one
saw three ships take
a Whale Each

Ther. SUN. SEPT. 3, 1893 Wea.

10

Took two Bow Heads

fine weather saw
Whales saw four
Ships take a Whale

Fresh breeze from
N.E fine weather day
1 steamers same
whaling have not
seen any whales to-day

Lat- 69.. 48 N
Long 136.. 20 W

fresh breeze from
North Saw whales
have been whaling
all day got mit saw
three ships take a whale
spoke St. Orca.
Shal steam to
windward about
2 hours, to night;

Took three Bow Heads

fresh breeze from North
been whaling all day took
three saw Narwhal take 4
Orca 5 and Beluga 3
at 10-30 PM 10 fathoms
of water saw land bearing
S.E Called it - Hoopers Isle

Took a Bow. Head
light-airs & Calms
boats down about all
day. at 4 P.M. Starboard
boat struck & got Whale
Cut in det water at 7 P.M.
5 Bbls in night

Ther. FRI. SEPT. 8, 1893 Wea.

One we did not look

Took a Bow Head 16

Fresh breze from NE
came foz squalls saw
quite a number of
whales got one boat
off - the Head let body go
at 4 pm struck another
irons drew but had
plenty of chance to kill
him before the irons
drew, saw Mary D. Hume
take two whales Newport
and Bedford each take
one,

Took a Bow Head 17

Forenoon strong breeze from N.E thick and foggy saw Grampus with boat down ship on opposite tacks at 4-30 P.M lowered for Bow Heads Larboard boat struck cut in the Whale got thrown at 10 P.M lost the Water Pail

J. S. E. G. M

Took a Bow. Head

Moderate breeze from North at daylight saw Whales lowered and got one large Whale saw three sail Newport sent boat on board with mail to take down saw his boat strike a Whale he has 10 Whales thick and foggy most of the day,

thick most of the day
lowered for whales at one
P.M. kept off S.W. spoke
Karluk cutting also
Grampus cutting Dave
Newport with boats down
have made up my
mind to go meat
luffed too at 7 P.M.
Capt Vincent came
on board.

morning fine
pleasant weather ship
steering S.S.W. & W.S.W. at 8
P.M. Herschel Isle.
bears S.E. by Compass
7 miles afternoon
thick dense fog most-
of the time till up at-
4 P.M. saw and passed
Martin Point at 6-30
at 8 P.M. thick fog.
shifted to head of Jardo
& back.

To day has been a breze from N.E thick and snow all day ship under all sail and steam steering to Westward coneing along in about 15 fathoms water at 8 P.M luffed two head yards aback 13 fathoms think I am 30 miles W.N.W of Return Reef.

Finished boiling this morning have put all the Coal from between decks into the bunkers to day washed the Decks and have had a general straiten up of things,

" So day has been a Clear
pleasant day at 7 A.M. Wind
hauled to Westward Ship under
steam and fore & aft sails
bound to West - A.M. Pours
W/h W. Carring, 11 fathoms
1-12 M. got 17 fathoms
1-1. P.M. no bottom al-
, altered Cours W.S.W.
1-5-30 14 fathoms

Lat 71.. 09 N
Lul 152.. 03 W

fine pleasent weather
Wind about S.E at daylight
Ship off Point Barrow
at 7 a.m anchored at Cape
Smyth. Mr Kelly came
on board let him have
all of my surplus trade
also Mr Aiken Supremant
of Refuge Station came
on board took my anchor
at nine a.m have
steered W.S.W under
all sail & steam

Lat 71.21 N
Long 157.39 W

morning breeze from
NE hauling gradualy around
to South and finaly to about
W.S.W ship broke off to N.W.W
have been steering West &
Wly N under all Sail & Steam
until the wind hauled, at
5 pm tacked ship to South
thinks I am in
Lat 73.00 N
Log 168.00 W

no appearence of any Ice
as yet

Forenoon fresh breeze from S.S.W. Ship under sail heading to westward at 11-30 got steam steamed until 4 P.M. Wind died away and came in thick fog at 1-30 Kept off N.W by N Run until four P.M. Saw a sail this morning heading to East

Lat - 72.10 N
Long 170.00 W

Ther. MON. SEPT. 18, 1893 Wea.

Fresh breeze from
Westward saw 8 sails
came up to Ice at 1 P.M.
Spoke "Thrusher" "Wanderer"
& "Baylie"

strong breeze from
Westward forenoon saw
a whale of some kind
lowered fine boat but
saw him no more
run off to N.E along the
ice at 11 a m luffed to the
wind heading to Ross at
4 P m more ship to
North Thrasher in
company, at 6 P m
wind moderated some
saw two sailing ships.

No Obs.

forenoon fresh breze
from Westward thick
fog ship on opposite tacks
at 12 M wind moderated
at 2-30 got steam and
steamed to Westward
saw 5 sail fog cleared
away at 5-30 at 7-30
came up to fee stopped
steam and made sail
wind very light from
South, ~~no~~

W W Bates

fine pleasant weather
light breeze from NE
have run to the West
along the Ice until 11 am
found ship in a deep bay
of Ice about 2½ miles
deep. all P.M have steered
out S E at 5 P.M came
in thick point of Ice
bears S by E luffed to the
wind heading E by S
saw one steamer and
one Crowbill

72.23 W.
172.26 W.

Light breeze from N E
swell from S E Lanv 0
Lail spoke Reinder &
Northern Light came thick
during the day.

Commences with a light-
breeze from Eastward with
snow squalls. Wind increasing
to a strong breeze run to-
West along the Jetty until
9 A.M then kept off S.S.W at-
10-45 hauled to heading to
S.S.E saw & sail and three
Steamers more ship at-
3 P.M heading N.N.E
Herald Island bears West
18 miles and in sight-
ship under prudent sail

No Above

To day has been light-
baffling winds Ship
on opposite tacks saw
8 Sails Herald Isle SW
by W.

No Obs.

forenoon light baffeling
winds considerable snow
saw five steamers and
2 Crowbills, at 6 PM saw
Navarch with boats down
afternoon fresh breeze
from N.E. Ship on
Northern tack saw some
Ice to N.E.

Lat 71.35 N,

Spoke J. H. Freeman
reports Area 26 Whales

fresh breeze from
North smokey weather
~~ship~~ an opposite tacks
working up under the
Ice. saw number
of seals spoke Steamer
Orca with 26 Whales

Lat: 72.08 N
Long 175:00 W.

Saw a Bow Head

To day has been a gow breeze from North. Same thick all mine A M Lowered for Bow Head Lain him three risenings then went to Windward saw 12 sail. Ship standing to Eastward all P M

No Obs

fresh breeze from North
some fogg dureing forenoon
ship under sail off & on
the Ice 1st sail in sight
afternoon clear & cloudy
no sun

No Obs.

fresh breeze from N.W.
some thick and snowy
showers forenoon afternoon
ship on opposite tacks A.M.
afternoon stood to West-
through some Ice saw
16 sail all told at 6 P.M.
ship in between two
strips of Ice about 3 miles
apart 4 steamers and 3
wind jammers here

71.46 N.
174.08 W.

Ther. SAT. SEPT. 30, 1893 Wea.

Lowered for a Bow Head

fresh breeze North some
snow squalls at mins
2 PM saw a Bow Head
lowered fine boats Whale
going South "Hunter"
came along saw the
Whale lowered his boats
at a struck & got the Whale
saw 15 sail saw Brew
with boats down. a little
while heavy swell from
East.

So Ends Sept. 1893

14 years old

Ther. SUN. OCT. 1, 1893 Wea.

Thirty two years ago to day started on my first voyage to Sea 1861

To day has been baffling winds from Northward & W. ship under sail on opposite tacks off & on the Ice at 12 m got steam and steamed to North until five P m made an Ice Course came to plenty of young Ice saw 16 sail at 12 m Herald Isle bore S½ E 25 Miles at five P m thus my position is

71. 47 N
173. 30 W.

Spoke Orca & Thrasher Belvidere & Horatio clear weather. most of the day very cold.

Breeze from W.S.W
thick & snowy all day ship
on opposite tacks Spoke
Brea saw 6 sail, considerable
young Ice.

breeze from westward
pleasant - weather Cruising
around every where saw
fine sail at - 12 M.
Herald Island bears S½W
35 miles at - dark S.S.W.
18 miles saw two ships
with boats - down saw
plenty White-fish - and
Walrus - no whales
taken to day

Lat. 3-1 N.
Long. 20 W.

To day has been a fresh breeze from about W.N.W. Now equals 5 steamers all running to P. C. every one have had their boats down but one no whales have been taken saw three sailing ships at Sun set Herald Island bears W by N. 5 miles in sight at Sun set hauled to the wind on southern tack with head yards aback. hope to get a whale to morrow.

Saw two Bow Heads

brisk unsteady wind
from Southward A M Ship
on Western tack lowered
for Bow Heads saw two Whales
going quick to Windward
saw them only one rising
saw 4 Steamers and
two wind Jammers;
P M Ship on Eastern tack
some snow squalls
during the day.

/////////

Ther. FRI OCT. 6, 1893 Wea.

Saw a Bow Head

forenoon thick snow
squalls fresh breeze in the
squalls lowered for a
Bow Head never saw
him after the boats went
down. Wind about South
at 10 a m wind hauled
to W.N.W a strong breeze
moderating gradualy
to a light breeze at 6 P m
wind about N.W.W light
fine snow from 11 a m
until 4 P.M. clear & pleasant
wd steam at four P m
and steamed W by N a shade
steam about 30 miles
saw nine sail.

Spoke Thrasher

71.00 N.
171.00 W.

forenoon light airs & varibles ship under steam steering to South at 11 AM came to young Ice made all sail wind breezed up from South at 1 P M got steam again and steered S by W. & by E and South wind increasing gradualy at 5.30 stoped steaming had two heavy snow squalls in the squalls wind hauled to about W.N.W. ship hove to under lower main topsail at 8 P.M. stop sails thrusher to windward spoke him at 4 P.M.

Lat 71.49 N.
171.00 W.

plenty young Ice could not see any big Ice.

To day has been a
fresh breze from westward
clear most of the time
ship under steam and
fore & aft sails all fore
noon at 12 M fore t. blew
out of main, feed pipe
stopped steaming and
made sail saw two steam
ne sailing vessel,
Ship heading to south all
day.

71.12 N.
172.27 W.

this has been a stormy day strong breze from South with much snow ship on opposite tacks under easy sail at 2 P.M. wind hauled to N.NW ship broke off to North Thrasher & Belvedere in sight thinks my Leong was incorrect yesterday got partial Obvs to day gives

Lat 70. 52 N
170. 50 W.

Sounded had 22 fathoms

To day has been a
baffeling wind from
westward got steam at
8 A M been steering to
westward all day spok
Belvedere Capt took came
on board a little while
weather clear & cloudy
smooth sea saw steamer
Jesse H. Freeman
& Thrasher

No Obs.

To day has been a light & baffeling wind from Eastward thick & snowy at 4 P.M wind hauled to N.E with much snow breezeing up gradually shortened sail before dark quite a Chop rigging think will have a breeze may be a gale ship heading to E.S.E saw two sail to Eastward

No Obvs.

blew heavy all night wind backed around from N.E to W.S.W and moderately at 3 a.m.

So day has been a light-
appeling wind from westward
hif on opposite tacks forenoon
much snow afternoon over
cast & cloudy at 12 m
sounded had 16 fathoms
think I am in the
vicinity of Herald Shoals
at 4-30 wind hauled N-
North wore ship N West

Seal 70. 32 N.
No Log.

To day has blew a heavy
gale from W.N.W with
heavy snow squalls Ship
have lost under storm
sails head to the North
very bad sea running
one from Westward and
one from N.E lost
starboard bow boat very
near loosing starboard
boat had a lull at 11 A.M
lasted until 2 P.M think
there is an Easterly Wind
not far away forenoon
17 fathoms afternoon
20 fathoms Water at 3
P.M had another lull for
about an hour then begun
on again from W.N.W
Bar steady at 29° 08

Gale from N.W with much snow at 6-30 am sounded had 19 fathoms kept off S.E by E under steam and lower main topsail hauled too and sounded every hour deepened the water gradualy to 28 fathoms one too at 4 pm head to S.W.E am not quite sure of my position so dont consider it prudent to run until I do determine my position accurately until Cape Lisburn is past 35 miles.

Bar. 28.95

forenoon heavy Gale from
N.W with heavy snow storm
(never saw til-snow so
hard before) Ship on Port-
tack heading N.N.E at 11 A.M
Wore ship heading to Westward
cleared off at 12 M. at one
P.M kept off S.S.E lower
Topsails & Storm luffed
to at 6-30 P.M Weather
thick Ship heads W.S.W
Sounded 25 fathoms
Gal- fair Obs.
69.. 10 N.
168.. 52 W.

at 6 A.M Bar. 28°.80
at 6 P.M. Bar. 29°.15
inclined to go up slowly.
still a very strong breeze

To day has been a Gale
from N.W. with heavy
squalls kept off at 3-30 A.M
P.E at 3-30 got steam
ours & got the upper
sail set but had to
take them in again
P.M plenty wind heavy
squalls run until 3 P.M
it so thick and snow
and coming on dark
think it best not to
attempt to go through
night think Cape
East is S by E 15 miles

67 " 12 N.
169. 17 W.

To day begins with a
fresh gale from Westward
at daylight East Cape S.W.½S
15 miles could not get out
by Cape East Ice made
across the Diamond
Island Kept off and came
out to Eastward wind
gradualy moderating
to a moderate breeze
and hauled to N.W clear
weather passed to East
of Fairway Rock at 10.45
Kind Isle. at 2-20 P.M
Course S.E.by.S.½S. all
sail & steam blew
away lower fore topsail
last night bent another
to day, got a bow. found
Chron. correct

to day has been light-
breeze from westward
died away to a Calm at-
1 A.M. stoped and caught-
about 60 Cod Fish steamed
ahead again at 2 P.M at-
tern set quite a breeze
from South Course S½W
if it breezes on much
more shal go on S.W
tack under fore & aft sails
and steam

62.. 20 N
169.. 11 W.

passed St. Laurence
Isl at 3 A.M in sight
at 12 M to NW 30 miles

"To day has been a
moderate gale from S W
with rainy weather weather
ship an opposite tacks blowed
away lower fore topsail
and old rag of a sail
last night steamed to lower
until 3 a.m. wind got
so strong could not
make headway enough to
make it pay so set storm
sails, and headed to Westward
at 8 PM More ship to S W
at 4 am set wind
moderated some been
repairing another old
topsail in the Cabin to
replace the one carried away
No Obs"

To day Commences with a breeze from about S.W cloudy wet-weather at sip 8 am got steam and steamed to S by E. S.E + S.E.by.S wind gradualy increasing so could not make much headway hove-to at 12.M on Port-tack heading to S.W Saw one sail to windward at dun set fresh gale from about S.S.E came main repaired old lower topsail and bent it in place of the one we blew away yesterday.

W O Brown

Commences with a fresh gale from S.S.W. Ship on weather tack smokey weather very heavy sea running sun out said at 6 P.M. Wind moderated some heavy sea does not go down any. Ship under lower topsails and storm stay sails.

61.. 23 N.
169.. 40 W.

Bar. steady at 29.. 5

Breeze from about S.S.W
not very strong smokey
weather got steam at 6 am
have steamed all day made
about 3 knots sea gradually
going down, Cape S.S.E.

61° 26 N.
170° 09 W.

Commences with a breeze from South heavy swell from South baffeling wind during A.M. some rain squalls P.M. wind about S.S.W. Ship under steam heading to South at 3 P.M. wind hauled to West made all sail course S½W saw two sail heading to South. have been employed in scraping bone.

3-9. 27 W.
170. 35 W.

Morning light breeze from N.N.W. clear weather
Ship under clew & bonnets
P.M. at 10 A.M. calm
Continued calm all day
Crew employed in scraping
& boxing sent up fore
yard & yard sent down
Noon. rest

56.. 52 N.
171.. 31 W.

day has been light-
airs and unsteady breeze from
South to S.S.W. Ship under steam
Course S by E. ½ E. Employed
in scraping bone

Lat 5-24 " 14 N.
Long. 172 " 01 W.

To day commences with
a Bridge from L.P.C at
6 A.M saw land
Schegulla & Amoyghla
L.P.C at 12 M Amoyghla
bears N.by.E 20, miles set
Top sails & foresail during
forenoon ship under steam
& sail heading S.by.W & S.by.E
P.M set light sails wind
veered to Eastward ship
came up L.E slowed
steaming at 4-25 P.M
all light sails employed
in dragging Bar,

to Abt

see out "72" page

To day commences with a moderate gale from N.N.E hauling gradually to N.N.W and blowing a strong gale with heavy cross sea running towards night cross sea about gone heavy sea running with with the wind ship steering Cours S.E. & S.E.by.E under topsails sam a Hermaphrodite Brig heading to Eastward at 3 P.M Bar. 29.60 started up slowly at 6 P.M 29.60 rizeing slowly.

No Obs.

To day has been a fresh breeze from W.N.W. hauling gradually to North heavy sea from N.W. Cows S.L.R. P.M. E.by.S employed in scraping bone.

Lat: 47°. 47' N.
Long 167°. 29'. W.

To day has been a light-baffeling wind from Eastward ship by the wind heading to North & N.E. finish scrapeing bone send down cutting gear and cleaned by marks been scrubbing up things generaly blew out boiler 24th Engineers have been cleaning up and making repairs finished to day filling boiler to night

No Obs

This day commences with
light-breeze from S.E clear
and cloudy wind hauling
gradualy to N.E and came
in thick at 8 P.M more
brisk to S.E finished stracking
the foreHold ~~that~~ washed
dry works and House over
dry works. at 7 P.M good
breeze ship by the wind.
hauling S.E thick drizzle rain

47.. 41 N.
164.. 20 W.

To day Commences with a moderate breeze from S.S.E hauling gradually to S.W thick fog allday wind freshened to a good breeze Course E. & E.S.E. washed ship inside

No Obs.

So Ends Oct 1893
my 48th birth day

The day has been a
weak bugge from S.W.
with thick fog + fine rain
coarse E. + E by N. carring
all sail

No Obs

To-day begins with a breeze of from S.W. with rain at 7 am wind hauled around to W.N.W and N.W. clear and cloudy Course East - employed in washing done. got good sight for Long. but poor Lat.

46.45 N
133.05 W.

Carrying all Sail

We have been an unsteady
breeze from about N.W.
cloudy weather Cause Cast-
ing all sail all hands
employed in making
one

1/5 " 1/2 N
1 5-2 " 1/5 N,

So day has been a fole
from West - cloudy weather
Ship steering Course East -
all hands employed in
washing down,
handed light-
sails 10 A.M. at 11 am
furled upper fore topsail

45.00 N.
148.39 W.

"To day has been a Gale
from westward considerable
rain lost in all but lower
topsails during forenoon
hours E. to E.N.E making
good weather as possible
all hands employed in
washing bone at 4. P.M.
Bar. 29.04' Weather equally
lowering strong about
N.E.W very heavy sea
running ship making
very good weather riding

No Obs."

To day has been a gale from W.S.W. & W. Courses E. to E.by N. mostly East rain all forenoon afternoon clear carrying Whole main Topsail & foresail Bar at 6 P.M. 29.50 and rizeing slowly signs of better weather

43.. 26 N,
140.. 42 W,

To day has been a light
ea from westward Cons
ral - finished walking bone
craped down etc,
Ship under Sail

42.. 26 N.
188.. 12 W.

To day has been a good breeze from S.S.W at 5 P.M hauling to S.W ship carring all sail Course East - bundles bone to day - 280 bundles 31,665 pounds

41.42 W
135.02 W.

Yesterday had been a light air from N.E. hauling round to about S.E. Ship under steam course last at 4 P.M. Course W/S.W. spoke Bark "Britain" Capt. Haggerty bound to San Francisco. Crew have been employed in scraping down and clearing up generally. At dusk got a little breeze ship undergone + aft sails + steam

40.. 41 N.
131.. 31 W.

To day begins with a light Airs + Calms after noon at 2 P.M. breeze up from North made all sail ship under sail + steam. AM Courses E½S P.M. E.by.S fine weather all day.

Lat. 39° 39 N.
Long. 127° 26 W.

Ther. SAT. NOV. 11, 1893 Wea.

Ther. THURS. NOV. 16, 1893 Wea.

Ther. FRI. NOV. 17, 1893 Wea.

Ther. SAT. NOV. 18, 1893 Wea.

Ther. THURS. NOV. 23, 1893 Wea.

Ther. SAT. NOV. 25, 1893 Wea.

put-in safe
in Office
Gold 120 ~
Open 115 ~

Ther. THURS. NOV. 30, 1893 Wea.

Ther. SUN. DEC. 3, 1893 Wea.

Ther. MON. DEC. 4, 1893 Wea.

Ther. TUES. DEC. 5, 1893 Wea.

Ther. FRI. DEC. 8, 1893 Wea.

Ther. SUN. DEC. 10, 1893 Wea.

Ther. TUES. DEC. 19, 1893 Wea.

Ther. THURS. DEC. 21, 1893 Wea.

Ther. MON. DEC. 25, 1893 Wea.

Ther. TUES. DEC. 26, 1893 Wea.

Ther. WED. DEC. 27, 1893 Wea.

Ther. FRI. DEC. 29, 1893 Wea.

Ther. SAT. DEC. 30, 1893 Wea.

New Bedford 10m 1852
Institution Savings

No	81586 —	1171.62
"	84779 —	1311.37
"	93730 —	1061.20

Five Cents Savings
Bank

No	51270	1020.

MEMORANDA 1893

Oil Planted May 13th

354	336	8 lbs. Seed
358	216	104.03
360	237	
224	230	9
309	242	
307	1367	
1912		

Sept. 12th 1893.

Latest report from the Wm Whaler at Herschel Island.

	No. Whales
Narwhal	39
Beluga	56
Grampus	38
Jn. & Hume	11
Newport	13
Karluk	20
Jennette	1

Dec. 26th 93.

Green Coal - 2 lb.	12.00
Quil - electric	7.20
Porter	89
Green Coal Pellets	5.98
Porter for chef.	1.50
" " "	

CASH ACCOUNT. JANUARY.

Date.		Received.		Paid.	

CASH ACCOUNT. JANUARY.

ate.		Received.		Paid.	

CASH ACCOUNT. FEBRUARY.

Date.		Received.		Paid.	

CASH ACCOUNT. FEBRUARY.

Date.		Received.		Paid.	

CASH ACCOUNT. MARCH.

Date.		Received.	Paid.
12th	Cash in Box $160.60		
16th	Took $12.00 from John Birch to keep for him		
22nd	Gave John Birch his money again, he came and asked for it;		
	Wm Bulloton gave me to keep for him	$337.00	

CASH ACCOUNT. MARCH.

Date.		Received.		Paid.	

CASH ACCOUNT. APRIL.

Date.		Received.		Paid.	

CASH ACCOUNT. APRIL.

Date.		Received.		Paid.	

CASH ACCOUNT. MAY.

Date.		Received.		Paid.	

CASH ACCOUNT. MAY.

Date.		Received.		Paid.	

CASH ACCOUNT. JUNE.

Date.		Received.		Paid.	

CASH ACCOUNT. JUNE.

Date.		Received.		Paid.	

CASH ACCOUNT. JULY.

Date.		Received.		Paid.	

CASH ACCOUNT. JULY.

Date.		Received.		Paid.	

CASH ACCOUNT. SEPTEMBER.

Date.		Received.		Paid.	

CASH ACCOUNT. SEPTEMBER.

Date.		Received.		Paid.	

CASH ACCOUNT. OCTOBER.

Date.		Received.		Paid.	

CASH ACCOUNT. OCTOBER.

Date.		Received.		Paid.	

CASH ACCOUNT. NOVEMBER.

Date.		Received.		Paid.	

CASH ACCOUNT. NOVEMBER.

Date.		Received.		Paid.	

CASH ACCOUNT. DECEMBER.

Date.		Received.		Paid.	
	C. A. Davis				
	Store Acct		1.	25	
	Milkey		1.	25	
	Pants		1.	50	
	Bowman			75	

CASH ACCOUNT. DECEMBER.

Date.		Received.		Paid.	

SUMMARY OF CASH ACCOUNT.

		Received.		Paid.	
JAN.					
FEB.					
MAR					
APR.					
MAY					
JUN.					
JUL.					
AUG.					
SEP.					
OCT.					
NOV.					
DEC.					
		£	s.	£	s.

BILLS PAYABLE. JANUARY.

Date.	NAME.	Dolls.	Cts.
1-4	owe f.	$ 20;	00

RECEIVABLE.

BILLS PAYABLE. FEBRUARY.

Date.	NAME.	Dolls.	Cts.

RECEIVABLE.

BILLS PAYABLE. MARCH.

Date.	NAME.	Dolls.	Cts.

RECEIVABLE.

BILLS PAYABLE. APRIL.

Date.	Name.	Dolls.	Cts.

RECEIVABLE.

BILLS PAYABLE. MAY.

Date.	NAME.	Dolls.	Cts.

RECEIVABLE.

BILLS PAYABLE. JUNE.

Date.	NAME.	Dolls.	Cts.

RECEIVABLE.

BILLS PAYABLE. JULY.

Date.	NAME.	Dolls.	Cts.

RECEIVABLE.

BILLS PAYABLE. AUGUST.

Date.	NAME.	Dolls.	Cts.

RECEIVABLE.

BILLS PAYABLE. SEPTEMBER.

Date.	NAME.	Dolls.	Cts.

RECEIVABLE.

BILLS PAYABLE. OCTOBER.

Date.	Name.	Dolls.	Cts.

RECEIVABLE.

BILLS PAYABLE. NOVEMBER.

Date.	NAME.	Dolls.	Cts.

RECEIVABLE.

BILLS PAYABLE. DECEMBER.

Date.	NAME.	Dolls.	Cts.

RECEIVABLE.

MEMORANDA.

Date.		Dolls.	Cts.

MEMORANDA.

Date.		Dolls.	Cts.

ADDRESSES.

NAME. J. G. Baker
STREET, No. Elm Street
CITY. So. Dartmouth Mass.

NAME. Fox
STREET, No. 126. O'Farrell
CITY. S. F.

NAME. Feeney
STREET, No. 737 Mansell.
CITY.

NAME. McNally
STREET, No. 262 Kearny
CITY.

NAME. Gibbons
STREET, No. 623 Kearny
CITY.

NAME. Frilch
STREET, No. 82 O'Farrell
CITY.

NAME. Everitt. F. Davis N.B.
STREET, No. C/o Walter C. Fornald.
CITY. Worcester Mass.

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